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APRIL, 1903.

THE OPHTHALMIC RECORD

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The May number of THE OPHTHALMIC RECORD will contain a full report of the proceedings of the Academy of Ophthalmology, an original article by A. B. Hale, M. D., Confessions of a Traveler (concluded), one by A. J. Erwin, M. D., The Conditions and Diseases of the Eye Which Make an Enucleation Necessary, one by F. H. Verhoeff, M. D., Simple Test for Stereoscopic Vision, one by Edward Lauder, M. D., Paralysis of External Rectus Muscle, Appearing After a Blow on the Skull. There will also appear Society Reports, Abstracts, Reviews and personals and items of interest to the profession.

THE RECORD particularly desires short practical papers on any subject connected with Ophthalmology. These will be published at as early a date as possible. It is understood that, unless otherwise arranged, original articles, when accepted, are contributed to the RECORD exclusively. Illustrative cuts will be made at the expense of the journal, and proofs for correction will be sent to authors when desired. Reprints with covers will be furnished at cost. The RECORD will be issued monthly, and each number will contain about 54 pages of reading matter.

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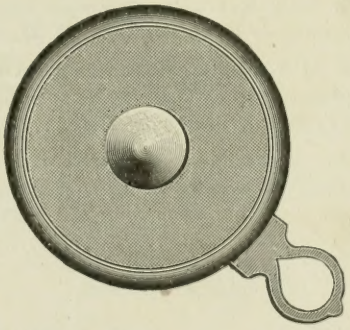

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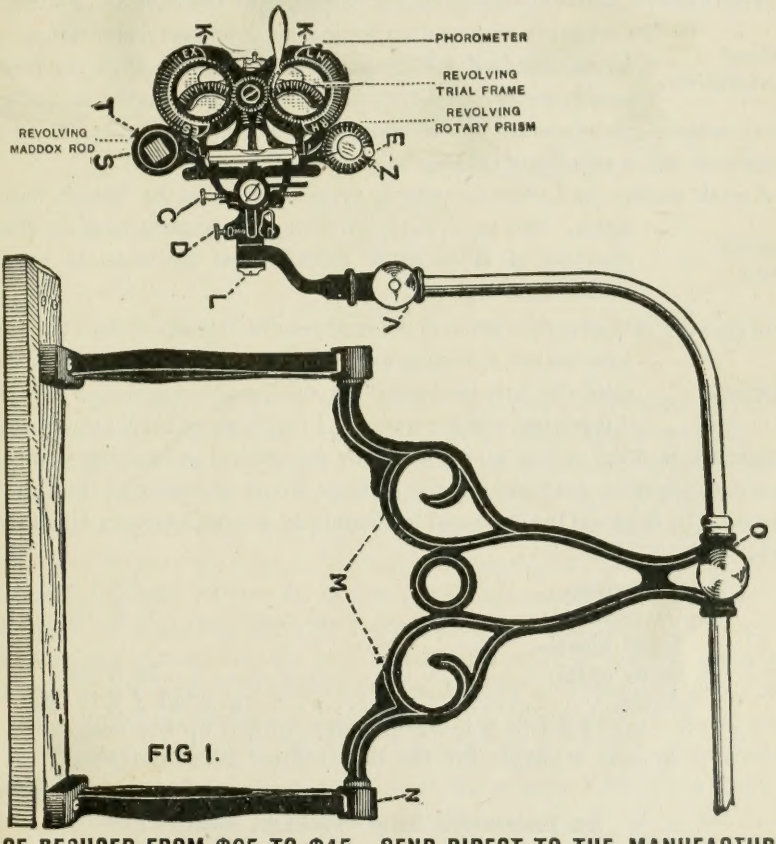

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THE

OPHTHALMIC RECORD

A MONTHLY REVIEW OF THE PROGRESS
OF OPHTHALMOLOGY.

VOLUME XII. No. 4. CHICAGO, APRIL, 1903. NEW SERIES.

ORIGINAL ARTICLES.

CONFESSIONS OF A TRAVELER.

(Continued.)

BY ALBERT B. HALE,
CHICAGO.

(Illustrated.)

WURZBURG.

As one passes from North to South Germany, conditions change. The landscape is different; not so flat, other trees and more hills or mountains, and not such great stretches of empty fields; in fact, parts of South Germany seem a continuous village. This aspect of the physical world is sympathetically expressed in the people themselves. They are larger, more genial, slower of movement and speech, but softer in manner. There is, too, more of the romance of history left, as I noticed in passing abruptly from Breslau to Würzburg in Bavaria. It is a busy manufacturing and commercial place of 75,000 inhabitants, but like many German cities, its activity is concealed while its holiday attire seems its natural garb. The University is one of the most famous in Germany and the Medical Faculty has always been carefully fostered, owing to the liberal endowment which the Julius Hospital has inherited. Our greatest interest, however, lies in the new Eye Hospital, planned and begun by v. Michel before his promotion to Berlin, but now finished and conducted by Professor Hess, advanced from Marburg to fill v. Michel's place.

If I use the word magnificent for the new hospital at Breslau, I must express my opinion of this at Würzburg by fascinating. The northern building is sturdier, it is of brick, modern, businesslike; the

southern building is softer in tone, of stone and stucco, fronted by a park, with the river Main running close to the side.

The first difference marked by the stranger is that there is practically only one entrance; patients of all classes must go through the same door with professor and students. In the long hall at the top of the steps it is not the easiest matter to find the waiting and examination or treatment rooms. Except for this slight criticism there is nothing but praise. The laboratories are commodious and well equipped; the lecture room is the best I saw in Germany, and the wards and operation room a delight for the scientific eye. The hospital was just a year old last summer and has seventy beds. The number of ambulant cases is relatively small. Averaging something like twenty a day, three to five of them at least being new cases, but they are generally interesting, and as many come from the surrounding country, quite varied in character. Professor Hess is an advocate of permanent sounds in tear sac cases and allows them to be worn for weeks at a time, the patients meanwhile returning home to work. He prefers silver nitrate to any other astringent. Of cataract operations, about one-half are without iridectomy. As v. Michel before him in Würzburg, he uses a binocular bandage for only twenty-four hours, till the first examination is made, and the patient may sit up within two or three days after the operation.

Working with Professor Hess, but on lines of his own is Docent and first assistant Dr. Römer, who has had a long training in general medicine and the hygienic laboratory before specializing in ophthalmology. His best known work is the outcome of this earlier training, for *Jequiritol* (Merck) is a laboratory product, and is an undoubted gain in the treatment of corneal opacities, while from the recently reported antipneumococcus serum in the treatment of ulcus serpens corneæ (Hypopyon Keratitis) I saw splendid results, and his demonstrations thereon at the last Heidelberg Congress were eagerly followed. Patients in the wards are visited about 9:30 in the morning, and the ambulant cases come and go, not in a mass, but irregularly during the forenoon. During the semester demonstrations or operations are at 12 o'clock.

FREIBURG.

The "joy of living" could hardly find more satisfactory expression than that feeling which the traveler and student has on his first or even last view of this little city in Baden. It is an epitome of South German romance, in history, architecture and natural beauty. Twenty years ago the University, although it has always had famous men in its

ILLUSTRATIONS

MENTIONED IN ARTICLE BY ALBERT B. HALE.

Fig. I. UNIVERSITY EYE HOSPITAL, WÜRZBURG

Fig. II. UNIVERSITY EYE HOSPITAL, FREIBURG

faculties, was a place where one went to have a good time. Of late, however, scientific energy seems to have thriven on poetry, and the medical faculty can boast of being wide awake to the needs of the present day. Hegar, Kraske, Emminghaus, v. Kahlden, are names well known; Killian in laryngology is famous, and today the eye hospital is becoming famous through the activity of Axenfeld, once associated with Uhthoff in Breslau, later professor in Rostock and now for nearly two years the successor of Manz.

It is in such small cities as Freiburg that one learns true student life, and at such small universities that one sees what fine work is done and what is the character of that work which has placed Germany prominent among modern teachers. Freiburg has 55,000 inhabitants and a rich and populous adjacent territory; the little hospital can accommodate only thirty-six patients (men and women, the children having no separate ward) while the poliklinik dwindles occasionally to five or ten a day, so that Axenfeld uses as material for demonstration chronic patients from the neighboring blind asylum. There is no independent lecture room, the treatment and demonstrations being conducted under the students' benches; the operating room is on the ground floor, small, but perfect in its appointment. In the examining rooms one sees every modern device for the exact investigation of the eye, and used too systematically for all cases. The laboratories are relatively large and well appointed. Professor Axenfeld has brought with him a fine and carefully arranged collection of slides and mountings, and with the help of Dr. Stock, first assistant (now Docent) he develops to the utmost every opportunity offered by any patient's disease, no matter how trivial or uninteresting it may at first appear. Professor Axenfeld is a careful operator, delicate in his touch and methodical in every step. He likes the capsule forceps of Wickerkiewitz for all cataracts, and in favorable cases delivers the lens without iridectomy. The binocular bandage is applied for the first twenty-four hours when the eye is examined, after which he uses the wire screen (Fuch's or a modification) and says that patients think it excellent. He is a hearty advocate of extirpation of the tearsac, especially when the patient lives a distance from the hospital and when there is the least danger to the cornea either from disease or from intentional operative interference. He has devised a toothed speculum as retractor and hemostat—sometimes using two at right angles to each other—by which the operation is simplified. The Germans submit to this operation under cocain anesthesia more frequently than do patients in America!

Although Uhthoff is actively associated with the *Klinische Monatsblätter für Augenheilkunde*, to Axenfeld is due credit for the energy which has developed this admirable periodical since it left Zehender's hands; and in Freiburg one may visit the editorial sanctum and see how German thought gets into print. The exchange list is large and cosmopolitan and the treatment of articles produced outside the country is as just as if it had been made in Germany.

UTRECHT.

The city, to be sure, is Dutch, clean, well built, of 100,000 inhabitants, but the University is modeled after the German rather than the French pattern, and the famous Eye Hospital under Snellen signifies for us such an intimate alliance with teutonic ophthalmology that it is hard to realize until one is actually there that one is on different ground. But the character of the people has changed, the atmosphere of the wards is not the same, and for this very reason, probably, the experience of having visited Utrecht and Snellen is doubly valuable.

The building lies on the outskirts of the city, about fifteen minutes by tram (horse) from the railway station. Externally it is very imposing, and the temptation is irresistible to get a fresh view every hour. In reality, it is a State Institution, independent of the University, with a directorate of its own, but so long as the association is so intimate between the University professor (at present Snellen) and the hospital, it may be considered as an integral part of the educational system. There are accommodations for 200 patients, men, women and children, and there was under construction a system of small wards across the garden for patients who do not exactly need ward treatment. The laboratories are excellent and commodious, but it did not seem to me that they were so constantly in use as they are in Germany.

Holland has four universities—Utrecht, Leyden, Amsterdam and Gronigen, but in an ophthalmologic sense Utrecht overshadows them all, as patients come hither from the extreme limits in every direction, and one even finds Germans and Belgians enjoying its privileges, since the beds are free, and practically every applicant is admitted to the wards without question.* There are 200 beds, not always full, but even in 100 beds the student finds more than enough to occupy his mind. Especially is this so when the Poliklinik is considered. Here the material is enormous; about thirty new patients, and 120 old cases

* I shall touch this point later, when I refer in my next article to the relation of the university to society.

Fig. III. EYE HOSPITAL, UTRECHT.

Fig. IV. MOORFIELD'S
ROYAL LONDON OPHTHALMIC HOSPITAL.

daily. The stream never ceases and from early morning till late afternoon the dozen or more assistants, appointed and voluntary, are steadily at work, taking histories, making examinations, conducting treatment and verifying or altering earlier diagnoses. The system of record keeping is fine and elaborate, so that pathologic processes or operations can be well studied in groups. There are several examination rooms, and one lecture room adjoining, but without the tiers of benches seen in the usual German university. As I was there during vacation, I can say nothing of the lectures or demonstrations.

The beauty of the exterior is remarkable, but there is a certain disappointment on entering; there is too much wood and plaster, the thoroughness of the modern German finish seems lacking; the beds in the wards are wood and the walls unfinished. The rooms themselves, however, are well lighted, well aired, cheerful and commodious. The operation room is not large, has wood floor and a wood table; there was not the brilliancy about it that I had expected from the fame of the klinik. The table and sterilizing apparatus were of the simplest. I think it worth mentioning that the nursing resembles more the American than the German system. The young women have training, they go out easier and sooner into independent professional life, and have not that subdued attitude toward the world that characterizes the nurses of Germany, even when they are deaconess (not Roman Catholic) sisters. In fact the prettiest young woman I saw in Europe was a head nurse in this Utrecht hospital. I wonder more Americans do not study there!

But one ceases to criticize in face of the gloriously unlimited material. I would not dare mention all the operations or operative and pathologic cases I saw—even in one morning. Dr. Rochat, the first (non-resident) assistant took it as a matter of course that he should have four to six operations at half past ten. Two keratotomies, an enucleation, an iridectomy, two glaukomies, was no unusual thing, and I should not hesitate to affirm that within four weeks, when active teaching under Professor Snellen was in progress, the student would see every operation in modern ophthalmic surgery performed under varying conditions and circumstances.

The poliklinik begins soon after eight in the morning and continues till past noon. Operations, so far as I could learn, were about half past ten.

LONDON.

London with its 5,000,000, is a city, a nation, a world, of itself in a clinical sense; its material is vast, unestimated, and yet it is only

justice to affirm that today English ophthalmology has yielded in popularity to Germany or to Vienna. One reason alone explains this: the scattered condition of the clinics. Every general hospital has its eye beds, and there are good workers there. Guy's, Higgins and Brailey; St. Bartholemew's and Jessup, University College and Tweedy (and Flemming). Many of these same men are, however, connected with the famous Royal London Ophthalmic Hospital—Moorfields—and thitherward the student turns when thinking of London.

The present Moorfields will be four years old in June, 1903, and is removed from its earlier location near Finsburg Circus and Liverpool Street Station to a more commodious but less accessible site north, in the City Road E. C. The building is all it should and can be in such a crowded spot. The main entrance is imposing and attractive, the staircases, elevators (lifts) and halls spacious; the wards large, clean and airy. One notices here at once that it is Anglo-Saxon sail, for the patients do not appear in uniform garb, each wears his or her selected clothing, and the German military line of tailed cotton coats has disappeared. The operating room is beautiful, small, but with two adjacent rooms for preparation, examination and anesthesia, so that in reality it is large enough, and built as perfect as modern science and art can suggest. On each side of the center space where the table rests, is a small tier of steps with metal bars over which the student leans to watch the operation. Wisely these accommodations have been restricted, so that each observer can obtain a relatively near view of the eye. In Moorfields I saw much use made of the dark operating room with local (electric) illumination and examination—the window adjustments are so exact and the illuminating apparatus so practical that there is need of but a simple hand movement on the orderly's or nurse's part to change from daylight to electric lamp.

Many men famous in English ophthalmology may be seen in this operating amphitheater—Gunn, Lawson, Lawford or Nettleship, Lang, Morton, Treacher Collins, Spicer, Fay; each has his days a week when at about half past ten in the morning he may be found "at work." These constitute the Senior Staff, and control the cases in the ward beds. The dispensary (out) patients are directly in the service of the Junior Staff, Assistant Surgeons, Flemming, Fisher, Lawson and Marshall, who also enter the wards but do not by right operate except during August and September, when the Seniors are supposed to be on vacation. The visitor is safe in going to Moorfields any day at ten, when he will find the day's operations scheduled in the front hallway; there may be two or ten, but always something. He

Fig. V. ROYAL WESTMINSTER OPHTHALMIC HOSPITAL LONDON.

will be made welcome and listen to a running talk on the particular case, sometimes with others to illustrate it, but never with such dogmatism or exhaustive analysis to bring the student to the operator's point of view as is characteristic in Germany. The German lecturer for the time being is never wrong, he asserts the only logical reason for doing so and so. The Englishman is willing to admit a choice but that at the moment he is guided by personal motives to do a certain thing.

The hospital has 140 beds, fifty of these unfortunately closed for lack of funds (September, 1902). Some of the most remarkable cases —operative and pathologic—in eye diseases are sure to be found here at any time, and a visit to them is an epitome of the wonderful resources at command; but I was more than surprised to find that for the student practically no use is made of ward teaching. On my application to make the rounds (at 8:30 to 9 in the morning until nearly 10:30), I was told that I was the first to wish to enjoy such a privilege. Students, both natives and foreigners, were content with the operations and the dispensary, and took no part in the great lessons to be learned from ward treatment or diagnosis.

The outpatient department is on the ground floor and may be reached from the main door, but is always by patients and usually by visitors entered from the rear on Peerless street. If I spoke of a stream in Berlin or Utrecht I must say torrent when trying to convey some idea of the ambulant material at Moorfields. From 8 a. m. until late noon the large waiting and examining rooms are crowded, often beyond comfort; new patients and old are pressing to the treatment desks, and the activity is as great as in a country railway station! Here the patients are examined and either sent to the wards or continued as ambulants; here the visual tests are made and necessary glasses prescribed, but for fundus study they are taken into the neighboring dark room, large, well appointed, thoroughly suited to the purpose.

The junior members of the staff conduct the dispensary, with the help of younger assistants (either appointed or voluntary) and students who are taking courses at the hospital. English clinical workers do not wear uniforms (jackets) and they stand at high desks on which are paper, record and prescription blanks and sometimes drugs, but it is not unusual for treatment to be carried out in another room and by a nurse. I was told that the hospital was suffering from lack of assistants and I can well imagine that even the great number of students applying for instruction, is hardly enough to handle the material; certainly it is not all carefully utilized, but I judged that it

was a bit more popular to listen than to work. The dispensary seems another institution from the hospital, and one must learn by experience how they work together. The fitting of glasses is a continuous performance, and there is an authorized optician near the entrance who is qualified to fill the prescriptions. There is also a lunch room at which patients may refresh themselves and the student cannot do better than to resort to it.

In proportion to the size of the hospital the laboratory is small and pathologic diagnosis is by no means so persistently applied as it is in Germany. Excepting during the time when systematic instruction courses are given, I could not see that the student would have opportunity here for laboratory wark. There is a beautiful collection of mounted eyes in the museum, but a museum does not make a laboratory, nor does a bench and a microscope ensure a diagnosis. Trying to speak without prejudice, I should say that a week in Breslau or Freiburg was equal to three in Moorfields, as far as an exhaustive study of each case was concerned, or ability and opportunity to watch the results of operation and treatment, but for the student or traveler who is intent on seeing many cases, or wishes at once and without change of residence to compare methods, to see technique at different men's hands, to experience as it were in its full vigor the resources of modern ophthalmology in practical application, there is today no place in the world to equal Moorfields. Even Vienna, the nearest approach to London, cannot in some respects offer what Moorfields does. The latter is not a one-man school, where a set theory or method predominates; for, although each man is independent of the other, there is a harmony of conduct if not of performance, that is pleasant to find. Vienna is a system of specialists, and the student must attach himself to one school at a time to get the best of instruction there.

In visiting London, it is only just to remember that there are other eye hospitals besides Moorfields. The Central London Ophthalmic Hospital, Gray's Inn Road, for instance; and there is excellent clinical material to be found at the South London Eye Hospital near the Elephant and Castle, but this is an unattractive and inaccessible neighborhood for the stranger; while probably the least visited but closest to the foreigners' habitat is the Royal Westminster Ophthalmic Hospital in King William street, but a stone's throw from Charing Cross itself, and adjacent to the Charing Cross Hospital. It has recently been remodeled and its quiet interior is a pleasant contrast to the confusion of the busiest street in the world, outside. On the staff are such well known names as Frost, Hartridge and Dodd.

ILLUSTRATION

MENTIONED IN ARTICLE BY GEORGE T. BRADY.

There are forty beds in rather small wards. The operating room is modern in every detail. The out-patient department is, like Moorfields, crowded, there being about fifty new patients a day, and upwards of 150 old ambulant cases. The out-patients assemble at 1 p. m. and examination and treatment begins shortly after. There are usually four independent attending men on duty, who, as I have mentioned, stand at little raised desks and make out histories as the cases are presented to them. Ophthalmoscopic examination was thorough, and here I found one of the finest dark rooms in Europe, but all treatment except fitting of glasses was carried on in a small cabinet close to the drug room and the patients' exit, so that it was nearly impossible to follow a case from its reception through examination, diagnosis, treatment and dismissal, without mixing in an unpleasant mess at the door. Of German deliberateness I saw no trace.

MUCOCELE OF THE LEFT INFERIOR LACHRYMAL CANALICULUS.

BY GEORGE T. BRADY, M. D.,
SAN FRANCISCO, CAL.
(From the Pathological Laboratory of Cooper Medical College.)
(Illustrated.)

Under the title of "Mucoceles of the Lachrymal Canalicules," but one case has been reported. Wharton Jones* describes such a lesion as appearing in both tear channels, accompanied by stillicidium lachrymarum. Midway between the punctum and the sac in each lid was a reddish elevated swelling about three mm. in diameter. Fungous tissue was pouting out of the punctum. After incision of the canals he found the cysts to be lined with granulation (fungous?) tissue surrounding an enclosed concretion of inspissated mucus. From this description, one would better term it dacryolithic obstruction of the canalicules, rather than retention cysts.

Mrs. M., fifty-nine years of age, consulted me on August 6th, 1901, for a growth on the inner portion of the left lower eyelid, existent for fifteen years, and which had perceptibly enlarged in the past twenty months. Fifteen years ago a stye developed at the site of the present swelling, keeping the part considerably inflamed for a period of two weeks. No epiphora occurred then or thereafter.

At the internal margin of the lower lid is seen a translucent cyst,

* Treatise on Practice and Principles of Ophthalmic Medicine and Surgery, 3rd Ed., London, 1865, p. 706.

11x6 mm. in extent, and elevated three mm. above its surroundings. Palpation proves it to be a sac completely filled with fluid. There is no pain to touch, nor obstruction to vision. Strong pressure fails to discharge the contents into the lachrymal lake, or nasal duct. The upper punctum is patulous; the lower entirely obliterated. No. 1 Bowman probe readily passes through the upper canaliculus, the lachrymal sac and nasal duct.

Aspirating some of the liquid with a hypodermic syringe, it is found to consist of watery mucus through which is irregularly distributed a number of swollen vacuolated epithelial cells, many having suffered extensive mucoid changes and whose protoplasm is in an advanced stage of fatty degeneration. (Sudan III.)

With a canaliculitome, I split the entire upper border of the cyst, and evacuated its contents. The nasal orifice of the nasal duct was then plugged and the lachrymal sac distended with a weak solution of methylene-blue injected through the superior canal. There was no regurgitation of the colored fluid from the sac into the cystic cavity. Any possible previous communication had long since been occluded. The sac was of normal dimensions and lay nasalward of the cyst.

The walls of the retention cyst on account of pressure atrophy were too thin to dissect out. So, with a small knife-like electrode, I denuded the lining epithelium, proceeding from within gradually outward. Four months of this treatment combined with compression, removed all traces of the cyst. At the date of writing, the lid has a normal appearance, and the walls of what was the cystic cavity are closely adherent.

135 GEARY STREET.

GLAUCOMA MALIGNUM—REPORT OF A CASE WITH RECOVERY OF VISION.*

BY H. E. PETERMAN, M. D.,

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Illustrated.

The subject of Malignant Glaucoma is one of profound interest to the oculist, for the reason that eyes thus affected usually proceed rapidly to blindness.

Some confusion exists as to the use of this term. A few writers

*Read before the Section of Ophthalmology and Otology of Medical and Chirurgical Faculty of Maryland.

include under it all cases of glaucoma resulting in blindness after operation.

Von Graefe[1] described this condition, as the malignant course, and stated that there are all degrees from the most severe, to those in which the course of the disease returns to the normal.

Schweigger[2] says "the term cannot be sharply defined, and includes under it those cases terminating unfavorably from intraocular hemorrhage."

According to Fuchs,[3] primary glaucoma constitutes about one per cent of all cases of eye disease, and it has been variously estimated that two per cent of all cases of glaucoma operated upon terminate in malignant glaucoma with resulting blindness.

Most cases of this affection follow iridectomy for glaucoma simplex, but cases are on record where it has followed sclerotomy. It also may follow, but more rarely, operation for acute, sub-acute, or even hemorrhagic glaucoma.

The question naturally presents itself, what is the cause of this greatly dreaded condition? A number of theories have been advanced by different observers.

Among the predisposing causes may be mentioned age and sex. Looking over the reports of a number of such cases I find that eighty-three per cent occurred in females, and that their ages ranged from seventeen to seventy-three.

Of the cases occurring in females, sixty-five per cent were during or near the climacteric period. Weber's[4] theory is that the lens is dislocated forward into the groove between the iris and ciliary body, and thus mechanically obstructs the circulation of the fluids in the eye, and increase of tension follows. Pagenstecher's[5] view coincides with that of Weber, both having arrived at their conclusions after examining an eye pathologically, that had been affected with malignant glaucoma, and each finding the lens displaced forward.

Nettleship[6] suggests that this forward dislocation or displacement of the lens is due to a weak suspensory ligament, allowing it to assume this position from slight pressure from the vitreous.

Priestly Smith[7] says that "The lens may be wounded, swell and block the wound, or that the uninjured lens may be driven forward by pressure from behind, and completely block the wound and annihilate the angle of the anterior chamber, so that no fluid escapes from the eye after the first hour or two, and the tension is soon as high or higher than before."

Schweigger[8] and Friedenwald[9] assume that there are obscure

structural anomalies inherent in the eye which form the basis for the production of malignant glaucoma, and the facts given to substantiate this theory are

First.—The bilateral character of the disease, which has been particularly emphasized by Schweigger.

Second.—The much greater predisposition of females.

Third.—The great preponderance of cases occurring after simple glaucoma.

The case which I wish to report has several interesting features. On the 10th of July, 1899, Mrs. M. T., aged 52, a woman of rather feeble health, consulted me concerning the condition of her right eye, which had been affected for several months. She described seeing colored rings around lights, at times, and of some obscuration of vision.

She had had quite a little pain in and around the eye preceding her visit. Had glasses fitted by opticians, and changed a couple of times, but received no benefit. When she consulted me on the above date, the pupil was moderately dilated, and did not respond to light. The anterior chamber was shallow, the cornea and media somewhat hazy, the conjunctiva slightly injected and the tension + 1.

The ophthalmoscope showed a myopia of about 3 diopters, also a deep glaucomatous excavation of the papilla, which did not extend entirely to the edge, especially at the nasal side. The retinal veins were slightly tortuous. The field of vision was decidedly contracted, especially in the superior nasal field. The temporal field to about 70°, the upper and lower to about 40°, and the superior nasal to 20°.

The left eye was apparently in good condition, having a normal physiological excavation of the papilla. The correcting glasses were as follows:

R. E. — 3. D S = —.75 C. ax. 90° V = 20/LXX

L. E. + .75 D S = +.75 C. ax. 180° V = 20/XX+.

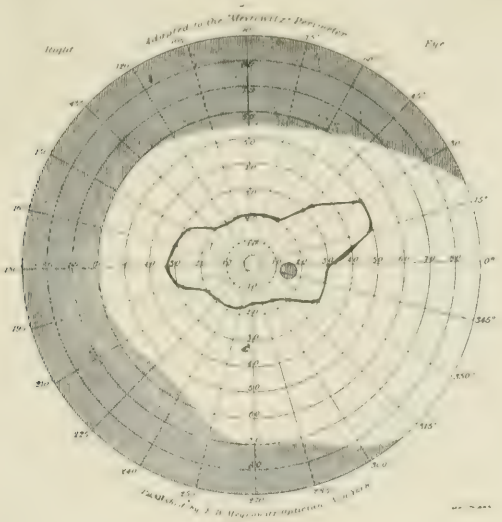
Patient was given a solution of eserine to be used in the right eye and asked to return in a day or two. July 13th patient returned, and eye was in much better condition. Pupil contracted, tension diminished, eye quite comfortable and vision with correcting glass improved to 20/XXX. The field of vision was taken again and found to be the same.

The patient continued under my care for two months without any change. I was then absent from the city for a month, and did not see her again until December 21st, when I found that the treatment had been stopped and the eye seriously neglected. The condition

was similar to that on her first visit, only somewhat aggravated. There was a general cloudiness of the media and some lens opacity which prevented a good view of the fundus, and of course vision was much reduced, but after a few days' use of eserine it was improved to 20/C.

At this visit I observed that the left eye had a strong venous pulse, but the tension, vision and field were normal. Operation was advised and after a couple of weeks consented to. See Field No. 1.

On January 8th, 1900, under cocaine anesthesia, a broad iridectomy was made in the right eye. The operation was rather painful, but a perfect coloboma resulted. There was a very free hemor-



No. 1.
Mrs. M. T. Jan. 5, 1900.
V=20/C, with glass. Taken 3 days before operation.

rhage after the excision of the iris, which filled the anterior chamber and obscured the vision. The eye was dressed, and as it was comfortable, was not disturbed until the morning of the second day after, when it was redressed, and found in good condition. As a precautionary measure, eserine was instilled in the left eye for a few days before and for several days after the operation. During the afternoon, or about forty-eight hours after the operation, she began to have pain in the eye, which became more severe during the night, and on the following morning at my regular visit, I found her suffering intensely. Examination of the eye showed extensive oedema of the lids and conjunctiva. The cornea was steamy and anesthetic and the eyeball very

hard T + 3. The anterior chamber was quite obliterated, the iris was lying against the cornea, but the wound was not gaping. Patient was given an anodyne and ordered to use hot applications over the eye. Strong solutions of eserine were istilled in the eye for several days, but I could not see that they had any effect.

A mydriatic was not tried in this case. Hot applications and strong solutions of opium lotion gave some relief from the severe pain, but anodynes had to be administered for several days.

On January 16th the patient was given salicylate of soda in large doses, gr. xx every two or three hours. On the following day the dosage was reduced somewhat, owing to its effect, but the drug was

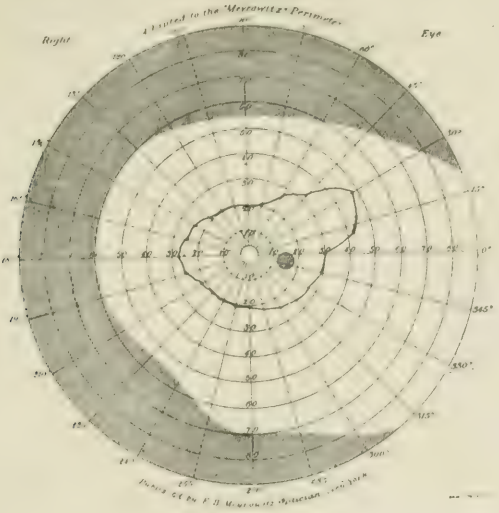
No. 2.
Mrs. M. T. March 12, 1900.
V=20/LXX, with glass. Taken about 2 mos. after operation.

continuously administered for several days. On January 20th, twelve days after the operation, the eye began to be less painful and to show some signs of improvement, but until this time, the pain was quite continuous, and when she was not under the effects of an anodyne she would be delirious. On January 22nd the oedema of the lids and conjunctiva had subsided and the eye was comparatively comfortable. Tension was nearly normal, anterior chamber partly re-established and still containing quite a little blood. The iris was adherent to the cornea at the inner side. January 27th I made the following note on the history card:

"Eye improving rapidly, cornea clear, injection clearing up, tension normal, synechia broken down, anterior chamber reformed and there is decided lens opacity."

From this on the improvement was rapid and uninterrupted.

On March 11th patient came to my office and a careful examination was made. The excavation of the papilla now extended quite to the edge, and the field was decidedly contracted (See Field No. 2), her myopia was found to have increased to 7 D and V = 20/70 there is decided lens opacity which prevents vision from being better. This eye was again carefully examined October 2nd, 1902, nearly three years after the operation, and the field (See Field No. 3) and vision were



No. 3.
Mrs. M. T. Oct. 2, 1902.
V=20/LX, with glass. Taken nearly 3 years after operation.

found much improved. Vision with correcting glass was 20/L +. The improvement in vision may have been due to some clearing of the lens opacity. In reviewing the history of this case, I think it will be conceded that I am right in classing it as a case of malignant glaucoma.

It may now be of interest to follow the condition of the left eye. This eye remained in good condition for one year after operation on the right eye. She then complained of failing vision. On examination the papilla was a dirty muddy color with the edges blurred. The

arteries were rather small and the veins slightly enlarged. Vision was reduced to 20/L. The field of vision was normal. For this condition she was treated with iodides and mercurials, but the vision remained about the same.

On April 22nd, 1902, this eye had a severe attack of acute inflammatory glaucoma, which resisted the free use of eserine and salicylates.

Not getting any relief from these measures an iridectomy was advised, but with caution, remembering the course of the other eye after operation. On April 28th, 1902, under holocaine anesthesia, an iridectomy was made on this eye.

Operation was very painful, but was smooth and uncomplicated, with the exception of a free hemorrhage into the anterior chamber.

She made an uneventful recovery, escaping the malignant course pursued by the other eye. One month after the operation, the eye had settled down to a natural condition, free from pain, congestion and abnormal tension, with the anterior chamber perfectly reformed. The field of the left eye was contracted concentrically, about 20° in all meridians. Four months later she called at my office, and examination showed fields the same in each eye, as when last taken, and eyes both in good condition with normal tension. She was now prescribed the following glasses for constant wear:

R. E. — S. s = — 1. C. ax. 120° V = 20/L +.
S. E. — 3. s = — 1. C. ax. 105° V = 20/L.

Among the interesting features of this case are:

First. The recovery of vision, which has remained stationary for a period of over three years after the operation. Dr. Friedenwald's case, reported in Knapp's Archives Vol. XXV, resulted with recovery of vision. Hirshburg and Schweigger have reported cases where some vision was retained for a time, but in nearly all cases reported, blindness was the inevitable result.

Second. It is interesting to follow the refraction of this case. When I first saw the patient, she had a compound myopic astigmatism against the rule in right eye, and a compound hypermetropic astigmatism against the rule in the left eye.

That astigmatism against the rule is an important factor in the causation of glaucoma, was pointed out by Dr. Theobald in an article in the *American Journal of Ophthalmology,* of October, 1888, and I have found it to exist in about one-third of the cases of glaucoma that have come under my observation. The change of the refraction is

particularly interesting. A change from three diopters of myopia in the right eye to eight diopters, and from a hypermetropia of nearly one diopter in the left eye, to a myopia of three diopters.

This change was evidently caused by the intra-ocular pressure, and a yielding sclerotic coat.

It is quite possible that the refraction of the right eye, which is now eight diopters of myopia, and which was three diopters of myopia when I first saw the case, was like the other eye hypermetropic before the glaucomatous process began.

Third. Another interesting point in this case was, that the second or left eye became affected with glaucoma two years and three months after the attack of malignant glaucoma in the right eye. An iridectomy was performed, and was not followed by an attack of malignant glaucoma.

So far as I have been able to search the literature on this subject, this case seems to be unique in this respect. Weber reports a case, in which iridectomy on the first eye did not produce malignant glaucoma, while on the second eye it did.

It has been so universally the rule for the second eye to be attacked by malignant glaucoma, when the first eye has pursued this course, that Schweigger[10] has said "When glaucoma malignum attacks one eye it follows iridectomy on the other, even when the other eye is not affected for years after the first;" also he said concerning the treatment: "All that we can do in cases of malignant glaucoma in one eye, when the other eye becomes affected, is to use eserine or pilocarpine in order to postpone blindness as long as possible."

When the second eye became affected in this case, it was in the form of an acute inflammatory glaucoma, which did not yield in the least to myotics and salicylates, and from the fact that the first eye recovered from its attack of malignant glaucoma; also that the attack in the second eye was a typical acute glaucoma and not a glaucoma simplex, caused me to brave the responsibilities and do the operation, which, fortunately, has resulted so favorably.

Concerning the treatment of these cases, Weber,[11] believing that they are caused by the lens being dislocated or displaced forward usually into the groove between the iris and ciliary body and thus mechanically obstructing the circulation of the fluids, advises measures to relieve the dislocation as follows: a puncture of the sclerotic 8 or 10 m.m. from the corneal margin and then pressure with the finger or other smooth instrument directly upon the cornea, at first gently and then with greater force for a minute or two. This procedure is, of course,

supposed to replace the lens and cause a re-establishment of the anterior chamber by the entrance of fluid between the iris and cornea.

He adds, that for this critical maneuver, a general anesthetic is usually necessary, and that if this method fails, or if the lens be injured or otherwise displaced, extraction affords the only chance of saving the eye.

Hirshburg[12] reports a case cured by this procedure.

Puncture of the vitreous was practiced by Von Graefe, and posterior sclerotomy by Javel, Fuchs, Massalon and Jacobson.

Strong solutions of eserine frequently repeated may be tried. Kollock[13] reports a case which was relieved by this treatment.

Lastly I may mention the use of salicylate of soda in large doses, which gave absolute relief in Friedenwald's case, and apparently was the important factor in relieving the case, which I have reported. Sutphen[14] reports a number of cases of primary and secondary glaucoma relieved by the use of this drug. He states that "he believes it to be almost a specific for the relief of severe pains so constant in secondary glaucoma, with or without an apparent rheumatic diathesis."

Also in several cases of glaucoma developing slowly without inflammatory symptoms, he has seen a decided decrease in the tension follow the administration of this drug and the disease be apparently held in check. Risley, in discussing Sutphen's article, says: "He has seen the biborate of soda have the same beneficial effect."

He thinks that it is the soda, and not the salicylic acid, which is the valuable agent in these cases.

The exact manner in which the salicylate of soda brings about its effects seems to be an unsettled question. Gifford,[15] after a number of experiments upon man and animals, is led to think, like Oltramare, that it is due to a general capillary dilatation, causing a local depletion of the parts affected.

BIBLIOGRAPHY.

1 *v. Graefe's Archives,* Vol. XXV, p. 203.

2 Schweigger—*Archives Ophthalmol.*, Vol. XX, p. 475.

3 Fuchs—*Text Book of Ophthalmology.*

4. Weber—*v. Graefe's Archives,* Vol. XXXIII, p. 82.

5 *Bericht Uber die Versammlung dar Ophthalmol. Gaselischaft,* Heidelberg, 1877.

6 Nettleship—*R. L. O. H. Reports,* Vol. XII, p. 72.

7 Priestly Smith—*Glaucoma,* p. 153.

8 Schweigger—*Op. Cit.* (2).

9 Friedenwald—*Archives Opthalmol.* Vol. XXV, p. 478.

10 Schweigger—*Op. Cit.* (2).

11 Weber—*Op. Cit.* (4).

12 Hirshberg's Case described in Rosenberg's *Weber Glaucoma Malignum,* Leipzig, 1894.

13 Kallock—*Transactions American Opthal. Soc.,* 1890, p. 634.

14 Sutphen—*Transactions American Opthal. Soc.,* 1895, p. 408.

15 Gifford—Ophthalmic Record, 1902, p. 632.

649 W. FRANKLIN STREET.

AMBLYOPIA WITH SLOW RECOVERY OF VISION AFTER EXTRACTION OF VERY OLD CATARACTS.

BY H. MOULTON, M. D.,
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The proposition that previously seeing eyes which have not been used for many years become amblyopic, and that such eyes when again brought into use may recover good vision, is strongly sustained by the two cases here related. In these cases the eyes became blind from cataract in childhood but at a slightly later age than most of those reported. Yet the amblyopia manifest after operation, and the subsequent improvement were marked. In one case both eyes were blinded at the age of seventeen years, and remained so for twenty-seven years. In the other the blindness was of one eye and lasted from the age of twelve years till the age of fifty-seven years, or for a total period of 45 years. This last case is very similar to the one reported by Dr. Friedenwald, in The Ophthalmic Record for January, 1903.

Case 1. Mrs. Ellen Wehunt, of Mena, Ark., age 44, consulted me December 15, 1900. She had been blind since about the age of seventeen years. The family history was negative and she was in good general health. From her account of her history the cause of her blindness could not be ascertained. But it was evident that in childhood her vision had been good. She had never learned to read, but this was due, not to inability to see during that time of early life when reading is usually learned, but to her environment. The condition of both eyes was practically the same, viz.: shrunken cataracts, mobile pupils, perception good, projection fair. Vision movements of hand close to eyes.

I operated on the right eye December 16th, and on the left eye

December 27. The method of operation was the same in both. Under cocain anesthesia, with a Graefe knife an incision was made in the upper periphery of the cornea 1 m.m. from its margin and embracing about one-third of its circumference. The shrunken lens was extracted with iris forceps together with the entire thickened capsule.

The cataracts were only about 1.5 m.m. in thickness and flexible though firm and coherent. As far as could be seen not a particle of opaque matter remained behind in either eye. Healing was prompt and uncomplicated, absolutely without reaction. The pupils were round and clean, and responded normally to light. Each eye was left unbandaged on the fifth day.

The ophthalmoscope showed an absolutely clear way for the entrance of light and a healthy fundus in each eye. Yet for the first few weeks there was very little vision; during the first days almost no more than before operation. The patient could not distinguish large objects even near her. Standing between her and a white wall she could not see me, yet she would recognize the movement of my hand at about four feet away. No object was recognized as different from its surroundings unless it was in motion. By the tenth day she could with difficulty count my fingers at four feet with the right eye after I had moved my hand. Before moving the hand she could not see it or even me. When I sent her to walk at this time with an attendant she saw nothing though the eye was open. Later, after the left eye had recovered sufficiently from its operation to allow her to walk out again she at first saw nothing. One day she came in with the news that she had recognized an empty can beside the walk. It was a long time before she could distinguish a white door knob on a dark painted door though she promptly counted fingers at the same distance across the room, where by movements, etc., I had succeeded in getting her to see my hand. Fixation was very imperfect. She evidently received images upon the retina but was utterly powerless to interpret them or locate them. I kept myself assured from time to time by ophthalmoscopic examinations that there was nothing wrong within the eye, and felt very much discouraged over the result. The pupils were round and normal in size and reaction. The ophthalmoscope required only a + 3.50 D. spherical lens to obtain a perfect view of the fundus and I thought she ought to see much better than she did. But as sight began to improve I began to understand that she was like one born blind and must learn to see again. So I encouraged her to hope.

By January 10th, twenty-four days after operation on the right

eye, she had with that eye with + 3.50 D spher. V = about 15/200. The left eye was too amblyopic at this time to be measured, except for counting fingers at about six feet. Her vision, though improving perceptibly, yet was of very little use. Nevertheless she went home and I have not seen her since. However, on January 23rd, 1901, I heard from her; sight was still improving. Again on March 18 she was using her glasses. She went about alone, could see to thread a needle or do anything else she liked, and was perfectly independent and happy. She thought she could see as well out of one eye as the other.

Case 2. Mrs. S. A. Ray, 57 years old was referred by Dr. Collins, October 1, 1902. Two weeks before this date her left eye, which had been her seeing eye, was attacked with inflammation. I found a sloughing cornea and panophthalmitis. Her right eye had been injured when she was twelve years old by a splinter of wood and had been blind ever since. There was a temporal corneal scar with iris involved in it. The inner and upper and lower borders of the pupil were free. The lens was cataractous and shrunken, the capsule being tied to the adherent leucoma by cicatricial bands. Vision equaled fingers at six inches; perception and projection good.

As the left eye was hopeless I asked the patient to wait till it was quiet and then return for operation on the right eye. She appeared for this purpose on January 8, 1903, and entered the hospital.

A corneal incision was made with a Graefe knife and an iridectomy made upwards and outwards. Most of the capsule and lens remnants were removed. Some of the capsule and with it probably some lens substance was necessarily left attached to the cicatrix. But the central area of the pupil to the extent of about four mm. was perfectly cleared of all obstruction, as was likewise the region of the iridectomy. The operation was accomplished without much unusual traumatism, but there was some dragging on the bands uniting the capsule to the region of the cicatrix in the iris. Fingers were counted and the eye bandaged.

On the second night, the patient was restless and during sleep rubbed the eye displacing the bandage and causing severe pain which lasted an hour or more. In the morning I found a slight hemorrhage into the anterior chamber. The wound was in coaptation. V = fingers at two feet; the blood was soon absorbed. Barring this accident recovery was normal.

On the twelfth day the eye was quiet and perfectly free from redness and photophobia. I ascertained by an ophthalmoscopic examina-

tion that the media were absolutely clear and the fundus apparently normal. Yet fingers were counted with difficulty at only two feet and the patient was very much depressed at the poor result. During the following days it was with great effort that she could be made to see any object. She could not fix her eye properly. The media remained clear.

Although by January 26, with + 9. D. Spher., she was made to see 10/200, yet she had to be led about. She then went home. Since then there has been gradual improvement and her physician informed me she is able to go about alone and recognize her friends, and is perfectly pleased with the result. She has not returned for glasses and as she is poor and lives at a great distance, it is doubtful if she will, else I had deferred this report.

There is no doubt these were cases of *amblyopia* from disuse. The persons were, after operation, as though they had been born blind, and had to learn, and did learn to see anew. Although not identical with the amblyopia of strabismus, they have an important bearing in that they prove that amblyopic eyes may be improved.

A NEW METHOD OF PREVENTING INFECTION FROM THE CONJUNCTIVA AFTER OPERATIONS INVOLVING OPENING THE ANTERIOR CHAMBER.

BY E. C. ELLETT, M. D.,
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The subject of the prevention of infection of a corneal wound from the lachrymal passages has been, as a rule, discussed with reference to some treatment of these passages, such as syringing, probing and finally closing the puncta or canaliculi by cautery or ligature. This matter is referred to in order to emphasize the fact that in the following case the infection was not expected to occur from the lachrymal passages, but from the conjunctiva. An incurable conjunctival discharge is not common, but when it occurs it offers an almost insurmountable barrier to any operation which includes incision of the cornea. It has frequently occurred to me that if some suitable covering could be provided for the corneal wound after such operations, and especially after that of cataract extraction, these operations could be performed with greater safety from infection than is now possible.

Thiersch grafts, egg membrane and other substances not of an organic nature, had been thought of, but in the following case were discarded for a plan which seemed to be superior to any of them.

G. J. P., aged 69, a white male, consulted me in August, 1902, with immature nuclear cataracts in both eyes. Dilatation of the pupils so improved his vision that an iridectomy was proposed for the purpose of improving the sight for a while, and of being utilized to facilitate the extraction when it should be done. Examination showed a small amount of muco-purulent discharge almost constantly in the conjunctival sac, its origin being apparently from the conjunctiva, as the lachrymal passages were permeable and healthy. The patient was not aware that there was anything abnormal with his eyes except the failure of vision, so that a definite history as to the duration of the conjunctival discharge was not obtainable. The nose was also healthy. The palpebral conjunctiva was reddened but smooth, and the bulbar portion of the membrane normal. A culture of the secretion gave a growth of staphylococci. Treatment of the conjunctiva was begun, mild measures giving way to more vigorous ones. Suffice it to say that a faithful trial was made of all the astringents that I had ever heard of, as well as daily washing of the lachrymal passages with an antiseptic solution, but without any effect on the conjunctival discharge. This treatment was carried out at my office for two months, and the patient was then sent to St. Joseph's Hospital, where he was under my care for a month longer, still without any improvement. He then passed to my colleagues at that institution, and was treated by two competent ophthalmologists for four months more. When I returned to duty at the hospital on March 1st, the patient was still in the ward and the condition of his conjunctiva was unchanged. None of us had dared to undertake the removal of the cataracts, which were now mature, for fear of infection. Concluding that the conjunctival condition was incurable, I told the patient that an operation was full of danger to him, but that it did not seem possible to remove the source of the danger, and that if he was willing to accept the risk an operation could be done which at least offered a possibility of success. He agreed to this, and the following operation was done: The conjunctiva was incised all-around the cornea as if an enucleation was to be performed. The conjunctiva was then dissected from the ball by means of a probe, care being taken to free it well in the upward and downward directions to a distance of about half an inch from the limbus. The cataract was rapidly extracted, the combined operation being done. The cut

edges of the conjunctiva were then picked up and drawn respectively upward and downward till they met over the cornea. They were then united by a horizontal row of stitches, so as to completely cover the cornea. Care was taken to secure perfect apposition between the edges of the conjunctival flaps, and no apparent gap was left in the line of union. Iodoform was dusted thickly on the line of union, and the eye covered by a light gauze dressing which rested on the cheek and brow and did not touch the eye. The eye was irrigated every hour with a boric solution and the iodoform reapplied after each washing. There was a good deal of pain for eight or ten hours after the operation, necessitating an opiate. The patient vomited once, before the opiate (codeine) was given. The operation was performed at 9 a. m., and under local anesthesia. The night of the operation the patient slept well, and had no further pain or other trouble. The eye looked very red, but there was no swelling of the conjunctiva or lids or other sign to indicate any unusual inflammatory reaction. The stitches were left in till the fourth day, when the ball seemed to have regained its natural contour and the wound had had plenty of time to close. On removing the stitches the conjunctival edges separated and exposed about one-fourth of the cornea. The corneal wound had closed and atropine was instilled. The edges of the conjunctiva continued to separate and the whole cornea was exposed about three days after the removal of the stitches, the conjunctiva attaching itself again in its normal position. This was to be expected, as it did not seem likely that union or adhesion could occur between the normal corneal surface and the conjunctiva. The final visual result was excellent, being 20/30 plus, with + 11.00 D. Attention is called to the absence of corneal astigmatism. A test made about two weeks after the operation showed 1.00 D, but before the end of the third week this had disappeared and none can be detected by ophthalmometric measurements or by the test lenses. Possibly this is due to the even pressure exerted on the cornea after the operation. The conjunctival discharge persists, and a culture shows pneumococci and staphylococci. A similar use of the conjunctiva has been proposed in France for the purpose of covering large corneal wounds, the result of injury. The originator of this method is entitled to due credit, and again I would emphasize the fact that the procedure I have adopted is not to be taken as a method to be employed in cases of lachrymal disease, where simpler and effective means of avoiding infection are in use.

A TUMOR OF THE DURA MATER COVERED BY THE CEREBELLUM, LOCATED IN THE POSTERIOR FOSSA OF THE SKULL. SOME OF THE SYMPTOMS RESULTING THEREFROM.

BY WILLIAM LEWIS BULLARD, M. D.,
COLUMBUS, GA.

In 1888, Mr. F. A. V., of Seale, Alabama, consulted me on account of an otitis media suppuarata chronicum of left ear since childhood. Under treatment the discharge soon ceased and patient was delighted with results, he having been advised not to expect restoration of hearing. In 1893 this same patient called to have his eyes examined for glasses. On inquiry I learned that at times he "had rush of blood to the head and falling spells." Patient was plethoric, short and stout, with splendid appetite. Was married and had three children, all of whom were healthy and sound. Vision about 20/40th, with no improvement by the use of glasses. Macroscopically eyes looked to be perfectly normal, no evidence of either proptosis or paraplegia of the eye muscles. The ophthalmoscope a tale unfolded and opened to view a typical case of hemorrhagic neuroretinitis, with a marked number of bright, almost glistening, yellow-white spots, surrounding the macula lutea, which tempted us to believe that albumin would be found in the urine on a chemical examination; but in this we were agreeably disappointed, though reminded that this ophthalmoscopical sign was not only an evidence of retinitis albuminurica, but occasionally (once in a lifetime possibly) it designated a tumor situated in the brain. Patient having no evidence, and his history indicating nothing of a specific trouble, induced me to give an unfavorable prognosis, yet with the hope that the growth might be of a gummy nature, patient was put on cor. sub. with increased doses of kali iod. with the hope of absorbing the same. In a few days vision cleared up and improved somewhat, (let me state, however, that the cause of this improvement was from the absorption of the hemorrhage and *tinct-tempore* was the cause and not from the medicine prescribed, as some would have us think). After this delusive (to the patient) improvement in vision of a week or ten days' duration another hemorrhage occurred accompanied by increased blindness. Patient continued to have at times "rush of blood to the head and spells." Inasmuch as we had not given out any hope of encouragement, patient was easily persuaded to leave for other shrines in search of a "relic cure," so the next time I saw patient he was under the care of a famous itinerant Doctor, who would have him believe that in a short while he would be completely cured; and all

that he would have to do would be to take seventeen doses of a different kind of medicine daily and twice a week shut himself up in a closet, and for one hour or more pray to Jesus, and during this solemn occasion to be sure to look to the East and think in a pleasant mood of this mysterious (to the laity) physician, who could diagnose any disease "by a simple touch of the body." Patient remained under the treatment of this "Boston Doctor" for ten or twelve months, and during the time patient was kind enough to call on me for an examination (only) several times, and each proved that his case was going from bad to worse, notwithstanding his faith held out to the last, until his physician was jailed in Chicago. About this time he was advised to go to a neighboring city to consult a distinguished oculist, who kept him under his care for a month, sending him home unimproved. In a short while patient changed to the care of a most competent practitioner of this city, who coincided with me, and told him that he had a tumor on the brain, and also put him on cor. sub. and kali iodidi. Suffice to say that during all this time, patient continued to call to see me for an examination, which at this stage, the vision was almost totally gone, and locomotion almost impossible. The disease progressed, so patient was sent home, and soon became bedridden and helpless, with (I have been told) increase of "spells," which terminated into hard convulsions, and these became frequent, until death relieved him of his untold sufferings. After death an autopsy was made by Dr. Charles B. Slade, of New York City, who took the growth to New York with him, and sending me the following report:

AUTOPSY.

Brain: markedly œdematous, convolutions flattened. Brain tissue somewhat softened; and the ventricles were filled with a serous fluid.

A circumscribed, well defined tumor about the size of a guinea egg was found located in the posterior fossa of the skull and covered by the cerebellum.

This tumor was attached by a small pedicle about the size of a goose quill to the dura mater, covering the posterior fossa (the pedicle being attached), just to the left of the median line, so that the tumor pressed chiefly on the left lateral lobe of the cerebellum, encroaching on the middle to a great extent.

Tumor was firm, resisting; and enclosed in a dense fibrous capsule, which was only slightly adherent to the surrounding structures.

Microscope showed the tumor to be a fibro-cellular structure with marked predominance of the cellular elements. The arrangement of the fibrous and cellular tissue was devoid of special significance.

(Signed) Chas. B. Slade, M. D.

THE
OPHTHALMIC RECORD

A MONTHLY REVIEW OF THE PROGRESS
OF OPHTHALMOLOGY.

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ABSTRACTS OF RECENT OPHTHALMIC LITERATURE.

BY E. A. SHUMWAY, M. D.,
PHILADELPHIA.

Vernal Conjunctivitis.—Marczel Falta (*Archiv. f. Augenheilk.*, August, 1902,) mentions a point which may be of service in differentiating between Frühjahr's catarrh and trachoma. If the eye is rubbed rapidly with the upper lid, or if the growths on the upper lid are rubbed with a glass rod, the patient with Frühjahr's catarrh will at once complain of severe itching, while the trachomatous patient will complain rather of pain. This symptom is characteristic and may be of especial assistance in the cold seasons, when the other symptoms of the disease are absent, and the conjunctival growths have more or less subsided. He sends his patients away to a cool mountain resort in summer time, and treats those who cannot leave their homes with cold compresses and massages the lesions on the tarsal and ocular conjunctiva with yellow ointment, applied on the end of a glass rod.

Terson (*Annales d' Oculistique,* Nov., 1902) reviews the literature of the same subject and gives descriptions of the microscopical appearances of the growths on the conjunctiva. He believes also that no local treatment has as much effect as the use of yellow ointment (1 to 20, or 1 to 40). The vegetations sometimes disappear entirely, the ointment is not irritating, and never aggravates the condition. The catarrh itself is relieved by the ordinary lotions of zinc, copper, petroleum, acetic acid, ichthyol, nitrate, etc. Protargol is perhaps the best topical application; cold compresses, vapor douches, cocaine, suprarenal extract or adrenalin are also good palliative measures. The tarsal growths sometimes require removal by the knife, and applications of the thermo-cautery. Internally arsenic should be administered and the patient sent to the mountains if possible. The prognosis

is always good: the condition ultimately disappears completely, leaving no traces on the cornea or conjunctiva, so that the general treatment is more important than the local. In the discussion of this paper before the Paris Société d'Optalmologie, Morax doubted the propriety of placing the disease in the list of infectious conditions of the conjunctiva. He thought there was a decided resemblance between it and certain cutaneous diseases, such as lichen, in which there was likewise marked itching.

Congenital Dacryocystitis.—G. Hirsch (*Archiv. f. Augenheilk.*, August, 1902) reports five cases of dacryocystitis in children, which appeared within a few days after birth. In all cases the mothers had well marked leucorrhœa. The diplococcus pneumoniæ was found in three of the five cases, and as the condition appeared immediately after birth, he assumes that there was an infection from the vaginal secretion, although he does not deny the possibility of the existence of obstruction of the nasal end of the tear duct. All of the cases healed spontaneously without surgical intervention or catheterization, by the repeated instillation of bichloride solution (1-3000) after thorough expression of the contents of the sac.

The Eyes of the Medical Students in Breslau.—Prof. H. Cohn (*Archiv. f. Augenheilk.*, October, 1902) has made a reexamination of the eyes of the medical students in the University of Breslau, and finds the conditions about the same as in 1866 and 1880. Myopia was present in 60 per cent of those examined, and averaged 3 dioptres. The same figures were found at the two previous examinations, so that the results would seem to be very discouraging, after the years of improved hygienic and prophylactic measures. It was not determined, however, that these students had been educated in hygienically improved schools, or that they had been under proper conditions at home, so that he believes the measures should be increased in strictness in the future. Every school room should be properly lighted and provided with suitable desks, the print should not be too small, and the tasks at home should not be too long. These hygienic precautions must be carried out also at the homes of the scholars. Children are very apt to lean over, in reading or writing, so as to obtain larger retinal images, and the teacher must be untiring in his efforts to make them sit erect. Cohn does not believe that the statistics recently brought forward to show that full correction of the myopia prevents its increase, are sufficient to settle the much mooted question as to the treatment of myopia. He believes,

with Förster, that the intraocular tension is not increased by the effort of accommodation, but by convergence, and that this is to be avoided by moving outward the far point of the eye, by wearing the myopic correction. He is in the habit of prescribing the full correction for distance, unless there is disturbance of vision by the reduction and distortion of the image by the glass, when the myopia is high. For close work, however, he reduces the strength of the glass, taking it off altogether, when the myopia is less than two dioptres, and reducing the amount by two dioptres when the myopia ranges from 2 to 8 dioptres. The convergence for 50 cm. is so little that it can not increase the intraocular pressure, and the patients are made far more comfortable. In the higher grades, especially where vision is poor, he advises strongly against any vocation which requires close work. Where this can not be avoided, he orders a glass much weaker than the full correction, for all near work.

Liebreich (*Annales d'Oculistique*, Nov., 1902) discusses the same subject of the treatment of myopia. He believes that progressive myopia is due to hereditary want of symmetry in the formation of the nasal half of the orbit, whereby the effort of convergence must be excessive, in order to fix at the reading point. In order to avoid this effort he urges strongly the use of prisms, base in, and believes that they are the sole positive remedy against the progress of the myopia. He prescribes them in the prodromal stage, when the children bring their books close to their eyes, although their refraction and acuity of vision are normal, determining the strength of the prism by the result in the tendency to bring the objects close to the eye. Later the prisms may be added to the concave glasses, when the myopia becomes manifest. In the majority of myopes he believes that it is necessary to order different glasses for far and near.

According to *Medical News*, a Philadelphia oculist of wide fame was recently traveling homeward from Pittsburg, when he noticed a fellow passenger, a lady, in evident distress with her eyes. Thinking that she was suffering from the presence of a cinder or other foreign body, he went to her seat and offered his services, saying that he was an oculist. She replied, quite haughtily, that she could wait until she reached Philadelphia, when she expected to consult a specialist "of some repute." The doctor humbly asked her pardon and resumed his seat. Within a few minutes of reaching his office the same young lady walked into his consulting-room.

REPORTS OF SOCIETIES.

OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM.

Friday, March 13, 1903.

W. Lang, F. R. C. S., president, in the chair.

Mr. Stephen Mayou read a paper on the *Treatment of Trachoma by the X-Rays*. The idea first occurred to him when treating rodent ulcer and lupus of the eyelid when he saw that no serious damage to the globe occurred. The first case cured in this way was shown by him last June. Since then several others have been successfully treated.

The histological changes in living tissues exposed to the x-rays were described, the most important being the superficial irritation capable of being increased and accelerated by the simultaneous application of the irritants such as sulphate of copper; most of the resulting leucocytosis is formed around the trachoma nodules and the cells of rodent ulcer after the x-ray treatment, the reason for this being that they similarly act as irritants.

It was next pointed out that with care the amount of reaction could be regulated, and that the varying degrees of reaction might be compared with the first three degrees of burns described by Dupuytren.

Cases of prolonged exposure of the globe to the x-rays were then instanced where the only bad effects produced, and these only temporarily, were falling out of the eyelashes and conjunctivitis; this latter trouble was also found among workers in the x-rays and in them could be prevented by the use of lead glass spectacles.

In experiments on rabbits and frogs Mr. Mayou found with Fuchs and Kriedl that there was no bleaching of the visual purple. The results of treatment with the x-rays were then compared with those produced by sulphate of copper, jequerity, etc., and it was pointed out that there was less destruction and subsequent cicatrization, as well as far less pain with the former treatment.

The technique of the treatment was next described. The lids were everted, the operator's hands being protected with bismuth ointment and cotton gloves; the cornea was only exposed in severe cases where pannus was present. Owing to the infiltration set up diffi-

culty was found in deciding when treatment should cease. Out of nine cases five remained well; one cleared up but recurred two months later, two others improved and were still under treatment, and in one case of corneal opacity following trachoma the vision improved from P, L, to fingers at three feet.

The advantages of the treatment were: (1) There was less resultant deformity of the lid. (2) It was painless. (3) Pannus cleared more thoroughly. The disadvantages were: (1) All patients did not react to x-rays. (2) It was difficult to say when treatment should cease.

Lantern slides and patients were shown.

Anophthalmos and Microphthalmos in a Chick.—Messrs. Treacher Collins and J. Herbert Parsons described the microscopical appearance of sections through the orbits of a chick in which the right eye appeared to be congenitally absent and the left eye abnormally small. In the right orbit a ring of hyaline cartilage, like that of the sclerotic was found enclosing partly pigmented tissue, similar to that of the choroid. There was no lens, retina, pigment epithelium nor optic nerve. That is to say, there was a complete failure in development of all structures derived from neural epiblast.

The essential element of an eye is a nervous mechanism which serves to receive visual sensations for transmission to the brain. Where this mechanism is completely absent the condition may be accurately described as one of anophthalmos, notwithstanding the presence of some of the subsidiary structures developed from mesoblast.

So far as the writers have been able to ascertain, there is no case of congenital absence of the eye where it has been satisfactorily shown by microscopical examination, that the mesoblastic structures were entirely absent.

On the left side the chick had a microphthalmic eye in which the lens had failed to become separated from the cornea. The capsule of the lens was adherent to the substantia propria of the cornea, Descemet's membrane having failed to develop. The adhesion had obstructed the growth of the iris forwards; above, it had turned back and crept round the posterior surface of the lens; below, its growth had become arrested.

Injuries to the Eye of the Child During Labor.—Drs. Ernest Thomson and Leslie Buchanan communicated some of the clinical and pathological observations which they have made upon this sub-

ject. After indicating the scope of the work done in this connection, Dr. Ernest Thomson gave a résumé of the lesions in the twelve cases observed. These comprised: expulsion of the eyeball, proptosis, injuries to the cornea, hemorrhages into various parts of the eye, and retroversion of the lens and vitreous body without rupture of the globe.

It was here pointed out that, owing to the limit of time, it was then proposed to devote special attention only to the most interesting points in the subject.

Dr. Leslie Buchanan then described in detail three cases of lesion of the cornea, namely: (1) Rupture of the posterior elastic lamina with involvement of corneal tissue, (Healing.) (2) Rupture of the posterior elastic lamina and corneal tissue. (Unhealed.) (3) Rupture of the posterior elastic lamina with abrasion. The points of similarity and difference were briefly explained. The identity of these cases of rupture of the posterior elastic lamina and corneal tissue with the cases already described as traumatic keratitis with linear opacity (trans. Ophth. Soc. V. xxii) from a clinical standpoint, was then pointed out, and the etiology of other corneal opacities seen at birth discussed.

Remark was made upon the very unusual injury, retroversion of the lens and vitreous body, and the nature and origin of the case somewhat fully explained. In conclusion the subject of traumatic exophthalmos was dealt with and allusion made to the connection between them and the localized indentation of the cranial bones due to pressure against the sacral promontory. The subject was illustrated by macroscopic and microscopic specimens and diagrams.

Mr. Lawford read notes of a case of *complete dislocation of the eyeball forwards*, occurring in a child aet. 7, the result of a fall against an iron fender. Reduction was easily effected under chloroform and recovery ensued with no defect of sight and no limitation of the movements of the eyeball. Slight proptosis was noticeable for one month after the accident, but no restriction of ocular movements could be detected even three days after the reduction of the dislocation.

C. Devereux, Marshall, F. R. C. S.

SECTION ON OPHTHALMOLOGY—COLLEGE OF PHYSICIANS OF PHILADELPHIA.

Meeting March 17, 1903. Dr. S. D. Risley, chairman, presiding. Subject for discussion: *The treatment of Myopia.*

Dr. Geo. C. Harlan, in introducing the subject for discussion, gave a short history of the treatment of myopia. He said that formerly there was an almost universal dread among ophthalmic surgeons, of full constant correction of myopia, particularly of the higher grades, but that recently a change of opinion and of practice had become quite general. Quotations from standard European authorities of comparatively recent date showed that undercorrection, especially for near work, was the universal teaching. In America, on the contrary, de Schweinitz, in his text book, and Duane, in his translation of Fuchs, advocate constant full correction as a rule.

In a discussion of the subject, at the meeting of the American Ophthalmological Society in 1892, a number of the members stated that they approved and practiced this method. More recently it has been gaining in favor in Europe, and at the last meeting of the Heidelberg Society it met with general acceptance, in fact, was opposed by none. The theory that the nearer the eyes can be approximated to the normal condition of emmetropia, the more comfortably and safely they can work, seems to be rapidly gaining ground.

The theory of undercorrection seems to be based principally upon the idea that accommodation rather than excessive convergence is the chief factor in progressive myopia, but it is now being more and more admitted that excessive convergence without accommodation is an important factor. The pressure of the external muscles tends to elongate the ball, and the strain of muscular asthenopia keeps up a constant irritation and congestion. The high myope, while encroaching upon his reserve of convergence, suppresses his accommodation, thus disturbing the close association of these two functions. Graefe, more than 30 years ago, strongly urged the performance of tenotomy of the external rectus as a curative measure in cases of progressive myopia associated with insufficiency of convergence. Usually the convergence will fall into line when the accommodation is put to work by the proper concave glass; if it does not, prisms or tenotomy are in order.

Of course, the full constant correction of high myopia is advocated only as a general rule to which there may be many exceptions, and each case should be studied and decided on its own demerits.

The diminution of the retinal image by concave glasses, and the consequent tendency to bring objects closer to secure a wider visual angle, should always be borne in mind, and the acuteness of vision and the range of accommodation should receive careful consideration. If full correction does not give fair vision, particularly if there are decided choroidal changes, it is sometimes well to throw off two or three diopters from the glass for constant use, and to give them to the patient in hook-fronts or lorgnettes, or even in a single glass hung about the neck, to be added occasionally for distant vision; and if the near point is farther than six or eight inches, bifocal glasses will often offer the best solution of the problem.

Dr. H. F. Hansell classified myopia under three heads: (1) congenital, (2) acquired, and (3) hereditary. In the first, the myopia is only the state of the refraction, and is a symptom, entirely secondary to the congenital disease of the sclera and dependent choroidal atrophy. It is in no sense the disease itself. It is found in childhood, and in individuals who have no education and whose progenitors have not been subjected to the strain of literary pursuits, for example, in the peasants who have emigrated to America. Concave lenses, several diopters weaker than the full correction, will materially improve vision, and possibly postpone for some years further degenerative procsses.

Acquired myopia includes those cases that were born hyperopic, but through educational requirements the refraction changes to emmetropia and finally into myopia. The most influential factor in inducing this increase in refraction is astigmatism The tendency to ectasia of the sclera is strengthened in the third class by inherited weakness of the sclera, which, in combination with the other causes, leads to the rapid development of the myopia.

In the optical treatment, the speaker's practice is to modify the strength of the lens in accordance with the degree, with the age, and with the relative strengths of adduction and abduction. For the distance, he prescribes as near a full correction as can be worn with comfort, believing that exophoria, so frequent a complication, is held in abeyance by sharp acuity of vision of each eye rather than by treatment directed to the muscles. For the near, he advocates less than the full correction, always in high degrees at any age, and in moderate degrees in adults and sometimes in children, for the reason that the myopic eye should be considered as a "sick" eye, and hence accommodation should not be forced. In the correction

of myopia higher than 8 D. or 10 D., he uses no cycloplegic. In all degrees the exact amount and axis of astigmatism should be learned and corrected.

Dr. G. E. de Schweinitz, after referring to the treatment of young persons whose eyes were passing gradually from hyperopic into myopic refraction, and the great importance that the recognition of such alterations in refraction, after repeated examinations, should have in the prevention of myopia, particularly in the recognition of the smallest degrees of astigmatism, said that in his remarks on the treatment of fully deevloped myopia he referred only to myopes with reasonably healthy eye-grounds, whose visual acuity could be raised by concave glasses to the normal standard, and did not take into consideration at that time forms of socalled pernicious myopia in which choroidal and other changes in the eye were evident, and in which, as Dr. Hansell had well said, the myopia was a symptom of disease.

Dr. de Schweinitz believed that young persons under 25, with good vision and a moderate degree of myopia (under 6 D.), should wear the full correction constantly if accommodation is ample and no signs of fatigue are evident. Indeed, he was prepared to say that the same rule was applicable to patients until they had reached those years when the accommodation must necessarily receive help, or when examination showed that the amplitude of accommodation was not equal to the necessities of the patient's life. He agreed with Dr. Jackson that full correction is the object to be attained for young persons with normal visual acuity and binocular near vision, no matter how high their myopia, provided the lens selected should not be an overcorrection when brought close to the eye. He fully understood and agreed that there were many exceptions to these rules, and, as Dr. Harlan has said, each case should be studied and decided on its own merits, but, other things being equal, he considered it a positive misfortune that when young people first came for the correction of their myopia they should be given the so-called undercorrections, because once undercorrection having been given, it was difficult to alter it to a full correction. He believed with Priestly-Smith that every youthful myopia should be suspected of a tendency to increase, and therefore should be re-examined at regular intervals, which intervals should not exceed in length twelve months, and that at each such examination full and prolonged mydriasis should be employed. He was satisfied that this method of treatment

tended to check myopia, and although he had in the earlier portion of his career, according to teaching then rather prevalent, given under-corrections, he had not done so, other things being equal, for the last ten or fifteen years, and had been satisfied that his results justified the course pursued. Dr. de Schweinitz was very sure that the fitting of glasses was not the only therapeutic measure suited to the treatment of myopia, but that the tendency to congestion of the choroid coat should be combatted by the administration of the various alteratives from time to time, and that active mydriasis with some drug, than which there was no better than atropin, for prolonged periods at a time when the recorrections before mentioned were made, had a distinct therapeutic value. He was satisfied that those who had expressed much dissatisfaction with what are known as full corrections often failed because they had not employed a sufficiently active mydriatic. Dr. de Schweinitz enumerated the cases of myopia which did not permit a full correction, independently of those exhibiting pathologic alterations in the fundus, and referred especially to the fact that he based his practice of giving full corrections in myopia entirely on the results obtained by the examination of the visual acuity, the range of accommodation, the character of the myopia and the condition of the external ocular muscles. He was most particular to measure and correct the smallest degrees of astigmatism, and was satisfied that among his most grateful patients he numbered those to whom he had given full correcting glasses for the neutralization of their myopia and myopic astigmatism, or whom he had taught to use full correcting glasses when they had previously struggled against the constant disadvantage of an undercorrection when viewing distant objects.

Dr. George M. Gould said: As we all know, every case is an individual study, and hardly any rule can be formulated as to the treatment of myopia which has not as many exceptions as instances in proof. The fact which renders almost all previous opinions, statistics, and data valueless is the omission of an accurate correction of the astigmatism. Our foreign colleagues have not cared to do this and have not chosen the proper means to do it. Without mydriasis and subjective testing the astigmatism in myopia cannot be found, and this vitiates all conclusions. The same may be said of anisometropia, equally neglected, and equally powerful to affect results. Then, I have never been able to determine what is meant by "full correction." It is easy to bring patients with myopia to normal

acuteness of vision and still the ametropia may be incorrectly diagnosed, may be undercorrected or overcorrected. It all depends upon the individual oculist, his methods, keenness of observation, conscientiousness, etc. As for myself, I never fully correct myopia, for constant use, and I believe such advice is wrong. My case records show that large portions of myopic patients have passed through the care of other oculists and are relieved of their reflex and local troubles by a modified glass or by undercorrection. One case may illustrate the evils of full or rather approximately full correction. A patient was given nearly full correction of a moderately high myopia, to be used only in riding or at the theater, etc. Every time he wears these glasses he at once gets a violent cold, with hoarseness and coryza. In an hour after taking the glasses off and return to his lower correction, given for house and business purposes, his "cold" disappears. This has happened hundreds of times. If these latter glasses become bent or maladjusted, he also gets his "cold," and goes to the optician to be cured at once.

Dr. T. H. Fenton believed in prescribing the full correcting lens for distance, but it was his custom to order a weaker glass for near work. The amount of reduction in the strength of the reading glass varied with the degree of defect, the age of the patient and the power of adduction. In high degrees of error he frequently gave one-half the full correcting lens for near use.

Dr. S. D. Risley, in closing the discussion, said that on careful analysis and in actual practice it could probably be shown that there was less actual divergence of opinions than appeared in any cursory view of the remarks made by the various speakers, but, nevertheless, practice in the treatment of myopia would be affected by the views entertained regarding the etiology and essential nature of the condition. Personally, he considered the subject one of the most serious confronting the ophthalmic surgeon. The classification made by Dr. Hansell was the conventional one, but in his own experience congenital myopia had been extremely rare, and, so far as he could recall, had occurred only among imbecile children who had other marked anatomical anomalies in the form of the skull. Indeed, he had seen very few cases of myopia before six or seven years of age.

Regarding heredity, he was not willing to accept it as a potent factor in the etiology of the affection, except in so far as certain hereditary anatomical peculiarities in the form of the skull, which led to abnormalities in the size and shape of the bony orbit, might

be regarded as an hereditary tendency. From an analysis of a large number of myopic patients treated in private practice, he found that myopic children quite as frequently had parents with hypermetropic astigmatism, and that the children of myopic parents were far more frequently hypermetropic than myopic. The only hereditary bias, beyond question, was the unvarying fact of the heredity of the hypermetropic eye with astigmatism and the absolute abnormalities of binocular balance.

This was due to the distortions of the family skull and the resulting abnormal shape of the orbit, which affected the form of the eyeball, giving rise to astigmatism, anisometropia, and abnormalities in the origin, line of direction, and attachment of the muscles to the globe. The eye strain caused by the effort to secure accurate binocular vision in the presence of these defective conditions set up congestive, irritative, and inflammatory states of the intra-ocular membranes which were, he believed, the important etiologic factors in the myopic eye. The intra-ocular congestion probably gave rise to a degree of tension of the globe which the readily yielding tissues—*i. e.*, the sclera—of childhood were not prepared to resist, and hence the distention or stretching of the globe.

Regarding the full optical corrections of myopia, the idea was by no means a new one, since he had, from his earliest experience, given full correcting glasses for distance, believing that the scientific procedure was to first determine the static refraction of the eye, and then reduce the optical conditions to emmetropia, since believed the emmetropic to be the model eye. He was confirmed in this view by the laboratory studies of Donders, whose book was his first text book. It would be recalled by those familiar with the subject that Donders had shown that myopes who had worn correcting glasses for a long time manifested, as shown by his charts, a relative range and region of accommodation and convergence which closely approximated that of emmetropia, the chart differing very widely from that of the uncorrected myope.

This, to him, afforded a strong argument in favor of full corrections, but, as Dr. Gould had very correctly claimed, it was impossible to establish a rule which would be applicable to all cases. There were many eyes too tender to bear the strain of accommodation and convergence at the near-point.

It was always to be borne in mind, as Dr. Hansell had so well said, following Donders in this, that the myopic eye is a sick eye.

It would be found that the conclusions regarding full corrections, based upon the experience of any individual surgeon, bear very close relation to his methods and the care with which he sought to correct any existing astigmatism or muscular imbalance. Undercorrections were unquestionably safer for the patient with bad eyes, where manifest corrections were made or in the absence of a carful analysis of all existing conditions. Personally he believed that in eyes with progressive myopia, no trustworthy measure of the static refraction of the eye could be made until under prolonged treatment with a strong and enduring mydriatic and complete rest the pathologic conditions of the fundus oculi had subsided. He had many times seen, under the most careful daily study, the myopia diminish day by day, changes taking place in both the degree of astigmatism and the direction of the corneal meridians, as the eye settled back toward a state of rest and health. Any glass, therefore, selected by subjective or even objective methods of examination, and ordered at the first trial, would not have represented the true static error, and would not have been worn either safely or comfortably. He contended, therefore, that the mydriatic in these sick eyes should be used not only as a cycloplegic but as a therapeutic measure, and that only by this means could the actual static refraction of the eyes be determined; that unless so determined in cases of progressive myopia undercorrecting glasses were safer.

Another point which could not be safely overlooked was that we could not expect these tender eyeballs, with blood vessels once distended and a sclerotic that had once given way under the strain of work, to resume continuous near work safely, except under the most favorable conditions. It was at this point, and at this only, he must differ with the views expressed by Dr. de Schweinitz. Except in the lower degrees he thought that work at the near-point in progressive myopia was done more safely with a glass giving an artificial far-point, just beyond the working distance, thus removing all strain on the accommodation and at the same time relieve the strain upon the convergence by prisms base in or a careful decentering of the glasses. This could often be done by a pair of bifocal glasses centered for infinity.

In concluding, he said that it was better to give such a reading glass for constant wear, with which no effort for distinct vision would be made, than to give approximate corrections, since a blurred image was always distressing because of the unconscious effort of the

accommodation to focus it. He illustrated this point by calling attention to the restfulness of the fine adjustment of the microscope, and by the distressing experience of spending an evening in looking at badly focussed pictures thrown on a screen which were sure to send the observer home with tired eyes and a headache.

WILLIAM M. SWEET,
Clerk of Section.

COLORADO OPHTHALMOLOGICAL SOCIETY.

Denver meeting of March 21st, 1903.

Reported by Melville Black, M. D.

Dr. D. H. Coover, chairman for the evening. Subject for discussion, *Lesions of the Macula.*

Dr. Coover gave a demonstration of the *Thorner Ophthalmoscope.* Several cases of obscure visual disturbance were examined with this instrument, but it did not throw any additional light upon the causation.

Dr. William C. Bane, of Denver, brought three cases before the society. His first case was that of a woman thirty years of age who had sub-acute glaucoma. The attacks had been held in check by the use of eserine. Dr. Bane wanted the expression of the society upon what operation would be advisable. His second case was that of a man upon whom he had operated for symblepharon. The upper lid had been adherent to the cornea with ocul-palpebral adhesions all the way up to and including the fornix. He had severed the adhesions and after covering the ocular raw surface with a mucous graft from the lip he placed a sheet of lead over it that extended to each canthus and well up into fornix. The result was that the symblepharon was completely severed except in the fornix. The cornea is still quite opaque. His third case was a woman with central scotoma, whom he had brought before the society several times before, and whom he now desired to have examined with the Thorner ophthalmoscope. The Thorner ophthalmoscope was accordingly used, but it did not show anything in the fundus that had not been seen with the ordinary ophthalmoscope.

Dr. Edward Jackson of Denver brought before the society Mrs. S., aged 21, that the Thorner ophthalmoscope might be used. She gave no history of recent acute disease, or any source or evidence of lead or

other poisoning. She had been wearing glasses for seven years. Lately she had suffered from daily headaches and some impairment of vision, with R. and L. + .50 Sph., vision 4/8 partly. With the ophthalmoscope the discs were found rather hazy, and the temporal quadrant pale and slightly greenish. The macula was relatively light in color, almost as light as the surrounding fundus. The foveal reflex was faint, broad and irregularly triangular. She had been under observation two months, during which time she had taken strychnia up to 1/12 grain doses three times a day. Her headaches were much better; but vision had declined to 4/12. The central color perception was perfect and there was no limitation of the field. The Thorner ophthalmoscope was used but nothing could be seen with it that had not been seen with the ordinary ophthalmoscope.

Dr. Coover brought before the society a man who came to him in 1894 who had sustained a *penetrating wound of sclero-corneal junction of right eye* from a piece of wood striking eye while he was splitting wood. The wound was in the temporal quadrant and was filled with iris, choroid, retina and vitreous. After clearing wound of these membranes four sutures were introduced and iced cloths applied. The sutures were removed on the fourth day, good union having been secured. Some months after the vision was 20/40 W. — 5.50 C. ax. 45. The lens was dislocated downward and forward, but was clear. Four years ago the lens became opaque. Lately he has had recurring hemorrhages into anterior chamber and the lens has become discolored so that the cosmetic appearance of the eye is very bad. He also has some increase of tension at times. The opaque discolored lens has been partially absorbed and is now kidney-shaped and lies anterior to the iris, if there is any iris. There seems to be a number of adhesions between the lens and the old wound. Dr. Coover desired to know what kind of an operation should be performed.

Dr. Melville Black of Denver brought before the society a woman aged 36 from whom he *removed the clear lens of her right eye for high myopia*. Her best vision was O. D. 5/27 — 20.00⊃ + 1.50 ax. 105. O. S. — 18.00 ⊃+ 1.50 ax. 75. February 4th the lens was freely needled, the anterior chamber being emptied purposely as the needle was withdrawn. Four days later, the lens being thoroughly opaque the anterior chamber was opened from above at sclero-corneal junction with a keratome and the soft lens matter was removed by pressure and counterpressure and syringing with normal salt solution. The healing was uneventful. Today she has a clear pupil with the exception of some capsule above and below, with vision of 5/15 without correction.

A minus .75 cyl. ax. 180 improves vision slightly but not enough to enable her to make out any more letters.

Discussion.—In Dr. Bane's case of glaucoma the general impression was that iridectomy would be most likely to prove successful, but that sympathectomy might be equally serviceable, inasmuch as the excreting angle was evidently not blocked.

Dr. Black advised Dr. Bane to try thiosinamine in his case of symblepharon to assist in absorbing the corneal opacity.

Discussion upon Dr. Coover's case brought out a unanimity of opinion that it would prove a difficult case to operate upon, but that operation of some kind was necessary not only for cosmetic reasons but to save the eye if possible and prevent sympathetic trouble of its fellow. There was some difference of opinion as to whether the section should be made at the site of the old wound or above that situation, also if it was advisable to attack the adhesions between the lens and old wound first or last in the lens extraction. Dr. Black contended that if attacked first hemorrhage would occur and obscure the field of operation, while Dr. Jackson believed that by making the section with a keratome at the site of the old wound the adhesions could be first broken up easily and the removal of the lens facilitated. According to Dr. Bane the hemorrhage could be washed from the anterior chamber by syringing. Dr. Coover thought some of using a linear knife to make the section and at the same time divide the adhesions. What he most feared was that the vitreous was fluid and that the eye would collapse as soon as opened. Dr. E. W. Stevens thought couching a possible procedure to be thought of.

Dr. Edward Jackson read a paper entitled *"Ophthalmoscopic Examination of the Macula."*

CHICAGO OPHTHALMOLOGICAL AND OTOLOGICAL SOCIETY.

REPORT OF MEETING OF FEBRUARY 10TH, 1903.

BY BROWN PUSEY, M. D., SECRETARY.

The president, Dr. Chas. H. Beard, in the chair.

Dr. H. Gradle showed *a baby with congenital cataracts and unusual thickening of the lenticular capsules.* The lenses were entirely opaque. The discission needle could not penetrate the center of the capsule. Subsequently he introduced the needle and later on the Knapp knife, through the periphery of the capsule. The lens

could be lacerated but no effect was visible in the capsule. After three discissions in each eye, without any irritative reaction, the capsule was extracted with iris forceps through a linear incision. One lens was found partly, the other nearly entirely, absorbed. Smooth healing with perfectly black pupils. The child, now 16 months old, was very slow to learn the use of its eyes, but after several months acted as if she enjoyed good sight.

Dr. Gradle also showed *three cases of retinal detachment with recovery.* The first, a man, age 31 years, highly myopic, had had a small detachment downward in the right eye since July. He was a patient of Dr. M. M. Ritter, seen by Gradle in consultation and during Dr. R's absence. Under subconjunctival injections of 2 per cent salt solution begun in September, he recovered entirely in about four weeks, and vision rose from fingers at six feet to 20/60 with —16 D. No change to date. The second case was a girl of 17 years with increasing myopia. The R. E. previously normal in sight with —6 D got blurred 10 days before examination. Flat detachment upward and outward. Rest on back. Thiosinamine and subconjunctival injections gave no result. Two weeks later on arising the detachment began to wander around the periphery, involving the entire retina except upward and showing a small steep bag downward. Treatment had no apparent effect. During the sixth week there was no treatment and when she returned at the end of that time the detachment was nearly gone, and a few days later the eye was normal. But with perfect field the central vision did not rise above 20/200 (corrected). Was the temporary recovery due to the treatment? After one month complete relapse of extensive detachment. The third patient, the mother of this girl, showed an extensive detachment of the temporal half of the retina (R. E.) in 1898. Myopia about 4 D and nasal half of the field practically blind with central V=fingers at four feet. Other eye normal and not myopic. As the disease had begun more than half a year ago no promise could be made as to improvement and Mrs. H. did not submit to treatment. At the present time the retina is completely reattached spontaneously and the field is perfect. But central V. did not rise above fingers at six feet with —4. The periphery shows a few faint inflammatory foci in the retina.

Dr. Casey Wood presented two cases illustrating the *removal of the tarsus in certain forms of chronic trachoma.* In the first instance both superior tarsal plates had been excised, after the method first suggested by Heisrath (1882). The patient, now 40 years of

age, had been attacked by the disease in both eyes twenty-one years ago and had been almost continuously under treatment, both in this country and Europe. In May, 1897, he was seen by Dr. Wood, who found him suffering from well marked trachoma in all four lids. The corneæ were covered with superficial scar markings and an almost complete pannus. On the right side was an anterior staphyloma for which Galezowski had done an iridectomy. The left upper lid having developed some trachomatous granular masses, these were removed by the forceps with temporary relief to the symptoms. Subsequent treatment, lasting all summer, was not satisfactory, although the granulations, secretions and symptoms were not so prominent. The patient was attacked from time to time by pin-point ulcers and became much discouraged. Vision in the left eye never rose higher than 7/200 and words of Jaeger iv, not improved by lenses; in the right it was finger counting at a few inches. The staphyloma corneæ, right, gradually increased and as the lens became hazy and there was very little conjunctival discharge, Dr. Wood removed the crystalline lens with no particular increase in the visual acuity, but with arrest of the staphylomatous process. Shortly afterwards (September, 1897) both upper tarsi were removed and from that date improvement set in; the pannus largely cleared, he had no more corneal ulcers, all acute symptoms disappeared and today he is cured of his trachoma, although he still bears the scars of the disease. With correction VL=2/7 and words of Jaeger ii at 12 cm.

The more recent case was operated on by Dr. Thomas A. Woodruff. Maggie D., aet. 27, had trachoma in both eyes for 12 years and exhibited frequent exacerbations of the acute symptoms during that time. The whole family have had trachoma—father, mother, and several sisters and brothers. She was seen Nov. 2, 1902, for an acute attack beginning four weeks previously. A well developed pannus covered the upper two-thirds of the left cornea, points in which were stained by fluorescein. The right eye was less affected. Trichiasis in all four lids, the right upper one having been operated on for entropion. Cold applications, mild antiseptic collyria and the use of argyrol (10 to 20 per cent) afforded much relief, but the irritative symptoms persisted. The right upper tarsal plate was removed Jan. 8, 1903, and the left one the following week. Patient has made an uneventful recovery, both eyes are quiet and vision has already improved (from partial disappearance of the corneal opacities) fifty per cent.

In an experience of thirty-five cases (twenty-one patients)

of chronic trachoma which Dr. Wood thought proper for this procedure he believes it is indicated in those instances where the disease has lasted several years and has resisted other and milder forms of treatment; these are usually cured, or at least much benefited, by tarsal excision. In them the infection is uniformly subconjunctival and there are nearly always trachomatous nodules in the tarsus itself. They are, of course, the cases in which one usually finds trichiasis, entropion, pannus, corneal ulcer, partially atrophied conjunctivæ, etc., and are not likely to be affected by superficial applications. Dr. Wood has never seen *as a result of the operation,* entropion, inability to shut the lids, symblepharon of any consequence, corneal ulcer, undue widening of the interpalpebral aperture or any other serious sequel. The granulations that fill the space formerly occupied by the tarsus often become exuberant and present at the line of the incision in the palpebral conjunctiva, but these soon subside when snipped off and touched with the nitrate of silver or alum stick. A description of the various steps in the operation has been published by Kuhnt, Casey Wood, and others.

In discussing Dr. Wood's cases Dr. Wm. H. Wilder said that some years ago, after reading an article on this subject by Dr. Wood, he decided to try the operation on some suitable cases at the Illinois Eye and Ear Infirmary, where there is such an abundance of trachomatous material. The cases selected were those in which, from the long duration of the disease, the tarsus had become greatly infiltrated and hypertrophied, and in which continuous treatment had failed to reduce the enlarged tarsus or prevent its irritating pressure effects on the eyeball. In several such cases the excision of the tarsus seemed to produce a very beneficial effect on the disease in the conjunctiva and the condition of the cornea. From his limited experience he said he would hardly speak of the operation as a simple or easy one, for he found it extremely difficult, if not impossible, to separate the conjunctiva from the tarsus, and so it practically amounted to removing all the conjunctiva that covered the excised portion of tarsus. That unfortunate results may follow this operation is illustrated by the fact that, in one of his cases, ulceration of the cornea occurred, followed by panophthalmitis and loss of the eye. Whether the ulceration of the cornea was caused by the presence of the stitches or was an independent affair arising in a cornea that was already greatly affected by the disease, are debatable questions. He was inclined to believe the latter furnishes the correct explanation.

Dr. Wilder believes the indications for the operation are found

in those cases where there is enlargement of the tarsus from infiltration of the disease, that, after a reasonable time, do not yield to the ordinary methods of treatment.

Dr. H. W. Woodruff *reported cases of extensive symblepharon and of shrunken and obliterated culs-de-sac, relieved by skin grafting,* with a description of the operation. A thorough dissection of the lid from the ball with removal of cicatricial tissue is first made. Have the cul-de-sac large in all dimensions. A plate is cut from a sheet of block tin, which will snugly fit into the new formed cul-de-sac. Four holes are made for sutures, two at the outer and two at the inner angles of the plate, to correspond to the lid margin. A Thiersch graft is taken from the inner surface of the arm, about one-third wider and more than three times as long as the plate. It is at once placed upon the plate with its raw surfaces external. The plate and graft are then pushed into the cul-de-sac so that the inner flap approximates the raw surface of the ball and the outer flap the raw lid surface. Plate is then sutured to the lid. The eye is dressed in the usual manner. The plate should be left in place for four days.

Six cases were reported and five were shown.

Cases Shown.—Case II. A symblepharon of the lower nasal quadrant of the cornea. Present result, eighteen months after the operation, no shrinking of the graft and no return of the symblepharon. *Case III.* Atrophied cul-de-sac. Patient had not worn an artificial eye for ten years. Result, ten months after the operation, shows a perfect cul-de-sac, depth 15 mm. An artificial eye has been worn since one month after the operation. *Case IV.* Both culs-de-sac closed by adhesions. Operations gave a good result. *Case V.* Both upper and lower culs-de-sac restored by operation. Present depth 20 mm. *Case VI.* Extensive symblepharon covering the lower half of the cornea and closing the lower cul-de-sac. Result, one month after operation, shows a cul-de-sac 15 mm. in depth.

Conclusions.—The operation relieves the symblepharon permanently. Advantages of the use of the plate over any other method of skin grafting are: (1) It enables one to place the graft at once in the position wanted. (2) It holds it down in the very bottom of the artificial cul-de-sac until it has adhered, so that the raw surfaces of the lid and ball in no part can again unite with each other in this angle, and even when the graft lives, gradually push it upward. (3) With the plate, accurate approximation and rest are secured.

The author was brought to try this operation through Dr. Boettcher, who had had a case operated on successfully by Dr. Hotz by this method.

In the discussion of Dr. Woodruff's report Dr. Thomas Faith said he had used the method with most gratifying results.

Dr. Hotz said that the series of Dr. Woodruff's symblepharon cases is a very valuable contribution to plastic eye surgery, for they must convince the most skeptic that symblepharon is not as desperate a condition as depicted in the textbooks. To him these cases are of especial interest, because they verify what he has been advocating the past 10 years, *i. e.*, that symblepharon can be permanently relieved by the use of Thiersch grafts. The chief and most essential condition of success is deep dissection in separating the lid from the eyeball; we must cut down until every strand of cicatricial tissue is severed and healthy tissue is reached. If scar tissue is left below the newly made fornix the graft will be pushed up and the fornix completely obliterated again. The use of the lead plates introduced by him in 1898 has simplified the operation materially, as it did away with the very laborious work of suturing the graft all around to the lid and the globe. The tin plate suggested to use by Dr. Boettcher two years ago is a still better, because more flexible material. The plate serves as a splint to stiffen the lid; it keeps the graft in perfect contact with the wound surfaces; it prevents the eyeball from moving and thus from dragging upon the graft; and it allows us to draw the lid away from the globe sufficiently to inspect the ocular portion of the graft and to cleanse the eye thoroughly by irrigation.

Dr. Hotz does not mount the graft on the plate, but transports it on the razor to the eye and spreads it out over the ocular wound first, where he fastens it on each side to the ocular conjunctiva by two fine sutures, one over the cornea and one over the fornix. Then the other portion of the graft is spread out over the lid surface and the plate, which has been carefully shaped before the graft is cut, is put in and tied to the lid margin.

In the March number of the *Annals of Gynecology and Pediatry*, Dr. S. D. Risley has an article, Good Vision an Important Factor in the Educational Process. In the article there is incorporated a copy of the report of the sub-committee (of which Dr. Risley is chairman) to the committee on medical examination of the schools of the Public Education Association, of Philadelphia, and copies of the cards of instruction for the teachers, and the card for the permanent record of the student, and that to be sent to the parent or guardian of any child whose vision is found to be defective.

NOTES AND NEWS.

ITEMS FOR THIS DEPARTMENT SHOULD BE SENT TO DR. BROWN PUSEY, 31 WASHINGTON ST., CHICAGO.

Dr. W. T. Montgomery has been having a vacation at Asheville, N. C.

Dr. J. Elliott Colburn has resigned as Professor of Ophthalmology in the Chicago Polyclinic.

The Thirty-fourth Annual Report of the Brooklyn Eye and Ear Hospital shows that 9,753 new eye cases were received at that institution last year.

Under the will of the late Lavinia E. Frey, of Baltimore, the Presbyterian Eye, Ear and Throat Charity Hospital of that city is bequeathed $500.00.

The Appellate Court of Indiana, in the case of Van Camp Hardware Co. vs. O'Brien, allowed $25,000 damages in the case of a girl, nine years of age, who lost the sight of her left eye by accident.

A competitive examination for positions on the house-staff of the Manhattan Eye and Ear Hospital, New York, will be held at the hospital at two o'clock on May first. Applicants should address Dr. J. B. Clemens, Secretary of the Examining Board.

Dr. Casey Wood, one of the editors of THE OPHTHALMIC RECORD, has been honored by his Alma Mater, the University of Bishops College, with the degree of Doctor of Civil Law (D. C. L.) ; this being the highest literary degree granted by the University.

Dr. George Ruehling, who, on October 1st, 1868, founded the Maryland Eye and Ear Infirmary (now the Eye and Ear Department of the Maryland General Hospital), celebrated, March 23rd, the thirty-fifth anniversary of his arrival in Baltimore. Dr. Ruehling is a native of Hesse-Darmstadt.

Report of the Case of a Child who was Born Without Eyes, by Dr. James M. Ball, of St. Louis, and Some Remarks on the Histology and Pathology of the Eye, by Dr. F. B. Tiffany, of Kansas City, were among the papers read at the Tri-State Medical Society held at Hannibal, Missouri, April 2 and 3.

"After two years of total blindness George Lewis, of Morristown, is able to see. His sight has been restored by a form of the Lorenz method of bloodless surgery. After the first treatment he could see well enough to walk home, and now, after two weeks, he is able to read!"—*New York Dispatch in Chicago newspapers.*

The St. Louis Medical Society of Missouri gave a banquet on Tuesday evening, April 14th, 1903, at the Planters Hotel, in honor of Drs. Simon Pollak, William Johnston, William M. McPheeters, John Bates Johnson. Dr. Pollak is one of the pioneers in ophthalmology in America. He graduated at the University of Vienna in 1835.

The Practical Details of Cataract Extraction is the title of a book written by H. Herbert, surgeon in charge of the Sir Cowasjee Jehangir Ophthalmic Hospital, Bombay, and just published by Bailliere, Tindall and Cox, London. The work is based on an experience such as can only be had in India. A good review of it is published in the London Lancet, March 28, 1903, p. 898.

Courses for physicians on the normal and pathological anatomy—gross and microscopic—of the eye, ear and nasal cavities are offered at the University of Chicago, beginning June 18th, and continuing through July. The work will be given in the laboratories of anatomy and pathology of the university; it will be arranged to occupy the student's time all day for five days of the week. The eye work will be given by Dr. Brown Pusey, that on the ear and nasal cavities by Dr. George E. Shambaugh.

One of the papers read at the meeting of the Ophthalmological Society of the United Kingdom, held on March 13th, was on X-rays in Trachoma, by Dr. Mayou. In comparing the results of treatment by X-rays with those produced by copper sulphate, jequirity and other irritants, it was pointed out that there was less destruction of tissue and subsequent cicatrization, as well as less pain, with the X-rays. Out of nine cases five remained well, one cleared up but recurred, two others improved and were still under treatment.

Adulteration Causes Blindness and Death.—A correspondent sends the following extract from the "*Waukon Standard*," suggesting that the fatal result may have been due to lemon extract made with wood instead of grain alcohol: "Clarence Floyd, a printer and newspaper writer of Center Point, Iowa, died last week after a protracted period of heavy drinking. Lately he had been unable to purchase

liquor, no one daring to sell it to him, but somehow he got hold of two dozen bottles of lemon extract. He drank all but three or four of these bottles, and he went blind on the streets of Vinton. Then he grew violent, and physicians were summoned. They could do nothing for him, and he died in horrible agony."—*Jour. Amer. Med. Ass'n, April* 4, 1903.

The Eyesight of School Children.—For some time the London School Board has had under consideration the question of the eyesight of the children, and the means to be taken for its preservation when defective. As a result, it has been decided to appoint six oculists. The general result of the preliminary test showed that while eighty per cent of the children in the schools were found to have normal vision and ten per cent fair vision, the sight of ten per cent was bad, and of these two or three per cent were very bad. Such defects of vision as existed were not due chiefly to fine work or bad lighting in the schools, but to social and nutritive conditions and to racial peculiarities, the proportion of those who had very bad sight being larger in the poorer schools than in those which were well-to-do, and larger in those schools which were predominantly Jewish than in those which were mainly Christians. The recommendation of the medical officer was that in future every child, when first admitted into a senior department, should be examined by the class teacher, and a vision record made, such test being repeated annually.—*Journal of Amer. Med. Association, April* 4,

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The bill prepared by the State Organization of Opticians and pushed through the Indiana legislature "to define and regulate the practice of Optometry and to create a board of examiners for same," was vetoed by the Governor. Commenting on this bill, the Governor said that he saw in it only the chance to establish an expensive state commission that would mulct one class of citizens out of exorbitant license and examination fees, without benefiting anybody in particular except the new commission. By the terms of the bill the practice of optometry was defined as "The employment of skilled means to determine the accommodative and defractive conditions of the eye, its requirements, the scope of its functions in general and the act of adapting lenses for the relief of eye-strain and the betterment of vision: Provided, The practice of optometry does not include the dispensing of medicine for the relief or cure of disease." The bill provided that it should be unlawful for any person to practice optometry in the state of Indiana unless he obtained a

certificate of registration from the board created by the bill—the Indiana State Board of Examiners in Optometry.

Royal London Ophthalmic Hospital.—The annual general meeting of the governors of this institution was held recently, Mr. H. P. Sturgis presiding. The chairman said that in the past year the attendances had considerably increased and eighteen beds which were opened through the liberality of King Edward's Hospital Fund were at once occupied. During the present year they had been enabled to open another thirty beds, also through the liberality of King Edward's Hospital Fund, and the number of available beds at the present time was 118. Turning to the question of finance, he pointed out that the deficit for this year was £5,400, against £5,100 in the previous year. This deficit was chiefly due to the loan obtained in 1901 from the Charity Commissioners in order to keep the hospital going at that time. One serious item in the expenses was the rates, which had increased to nearly £1,000 a year. In common with a great many other managers of hospitals they felt that hospitals should be relieved from paying rates and were taking steps to get this rectified. The total expenditure last year amounted to nearly £12,000, and in the current year it would be rather more on account of the extra beds which had been opened. They required £6,000 more from donations and subscriptions in order to make both ends meet, and they were anxious to get special donations towards a fund for paying off the loan from the Charity Commissioners and also towards a fund of about £50,000 to guarantee their rent of £1,200 a year. They had so far received £1,200 towards the latter fund.—*The Lancet, March* 21st, 1903.

A New Illuminant for the Fundus Oculi.—"The large number of red rays reflected from the fundus of the eye when examining it by the ordinary light tends to mask some of the detail; this is especially the case in disease of the retina and with the fine terminations of the arteries. In microscopy it is well known that the insertion of a Gifford's screen between the light and the section adds greatly to the detail by absorbing the red rays where structures have been stained red. By the kind courtesy of the Westinghouse Electrical Company I have been able to examine a number of fundi, both normal and diseased, by means of the mercury vapor lamp, the light of which is produced by allowing a direct current to flow through a vacuum containing mercury, from a platinum to an iron electrode, the resistance in the tube having been first broken down by a spark of high tension. This

light, when examined spectroscopically, is seen to be deficient in red rays, being very rich in blue and violet. The light, although brilliant, is diffuse and produces an "after image" of very short duration. On looking at the fundus by this light the "background" appears pale green instead of the usual red; the vessels appear purple, standing out with unusual distinctness; the arteries being the same color as the veins, can be traced to their finest ramifications. The choroidal vessels are of a deeper purple and over the whole the retina can be seen glistening, being especially well marked along the arteries and veins. The optic disc appears with a white center and green edges. This illuminant ought to be of considerable utility in the differential diagnosis of retinal and choroidal disease, since the perspective of the retina, choroid, and sclera is very clear. Although the lamp in its present form is hardly suitable for ophthalmoscopic work, alterations could be easily made for this purpose. A somewhat similar effect can be produced by using an arc lamp and screening off the red rays, but the same definition and detail cannot be obtained as with the mercury vapor lamp."—M. S. Mayou in *The Lancet,* March 28th, 1903.

PROGRAM OF THE SECTION ON OPHTHALMOLOGY AMERICAN MEDICAL ASSOCIATION.

Chairman, John E. Weeks, New York; Secretary, Frank C. Todd, Minneapolis.

Address of the Chairman.

Vernal Conjunctivitis, Wm. Campbell Posey, Philadelphia.

Subtropical Trachoma, with Special Reference to a New Therapeutic Agent, Ruffin A. Wright, Mobile, Ala.

The Treatment of Trachoma, Edgar Doak Capps, Fort Worth, Texas.

The Action of Adrenalin in Acute Conjunctival Inflammation, Louis J. Lautenbach, Philadelphia.

Experimental Study on Some Methods of Combating Post-Operative Infection of the Anterior Segment of the Globe, E. C. Ellett, Memphis, Tenn.

Ocular Complications of Bright's Disease, Louis Stricker, Cincinnati.

Subconjunctival Medication with an Especial Reference to the Use of Salt-Sugar Solution in Acute Affections of the Anterior Portions of the Eye, Howard M. Morton, Minneapolis.

Albuminuric Retinitis and the Decapsulation of the Kidney, George F. Suker, Chicago.

SYMPOSIUM ON THE INFLUENCE OF THE CERVICAL SYMPATHETIC ON THE EYE.

(A) Experimental Researches Regarding the Influence of the Cervical Sympathetic on the Eye, George E. de Schweinitz, Philadelphia.

(B) The Influence of Resection of the Superior Ganglion of the Cervical Sympathetic in Glaucoma, Wm. H. Wilder, Chicago.

(C) Influence of Resection of the Cervical Sympathetic in Optic Nerve Atrophy, Hydrophthalmus and Exophthalmic Goiter, James Moores Ball, St. Louis.

(D) Pathology of the Cervical Sympathetic, John E. Weeks, New York.

Arteriosclerosis (Endarteritis) and Its Bearing on Retinal and Choroidal Lesions, Charles Stedman Bull, New York.

Study of the Nerve Head in Relation to Certain Other Fundus Anomalies, Charles H. Beard, Chicago.

Retinal Disease Limited to the Region of the Macula Lutea, Henry Gradle, Chicago.

Address: Congenital Total Color Blindness, Based on a Study of Nine Cases, Prof. Wm. Uhthoff, Breslau, Germany.

Pathologic Exhibit, prepared by a committee consisting of Casey A. Wood, Chicago; Edward A. Shumway, Philadelphia, and H. V. Würdemann, Milwaukee, Wis.

Report of committee:

Methods of Preparing and Preserving Ophthalmic Specimens for the Museum. Address by Chairman, Casey A. Wood.

Some Points in the Pathology of the Eye. Illustrated by the Present Exhibit of Morbid Growths, Edward A. Shumway.

SYMPOSIUM ON THE BACTERIOLOGY OF THE EYE.

Bacteriologic Exhibit, prepared by a committee consisting of R. L. Randolph, Baltimore; Brown Pusey, Chicago; and Edgar Thompson, New York.

(1) The Bacteria Concerned in the Production of Eye Inflammations; address by Chairman, Robert L. Randolph.

(2) Bacteria in the Conjunctiva, Cornea, Iris, Ciliary Body and Choroid, and Changes Caused Thereby. (Illustrated by projection with a lantern of sections and lantern slides.) Brown Pusey, Chicago.

(3) The Essentials and Unessentials of Ophthalmic Asepsis, Harold Gifford, Omaha.

Development of the Fusion Center in the Treatment of Strabismus, Nelson M. Black, Milwaukee, Wis.

A Set of Charts for Stereoscope To Be Used for an Amblyopic Eye or for Treatment of Squint, Albert B. Hale, Chicago.

Cramp of the Ciliary Muscle Due to Eye-strain, J. W. Wright, Columbus, O.

Skiascopy as a Method of Precision, Edward Jackson, Denver.

Some Observations on the Eye Complications of Smallpox During the Recent Epidemic in Cleveland, A. R. Baker, Cleveland, O.

Some Rare Corneal Complications in Ophthalmia Neonatorum, A. A. Hubbell, Buffalo, N. Y.

Skin Grafting on the Eyelids, Oscar Dodd, Chicago.

Entropion and the Operations Employed for Its Relief, John O. McReynolds, Dallas, Texas.

Sympathetic Ophthalmia as the Result of Trauma in the Ciliary Region, John Sabert Mott, Kansas City, Mo.

A Case of Syphilitic Orbital Periostitis and Optic Neuritis, in which Vision Was Nearly Extinguished But Fully Restored, F. C. Hotz, Chicago.

Traumatic Lesions of the Ocular Adnexa; with Report of a Case of Contused Wound of the Eyebrow Resulting in Complete Monocular Blindness Unaccompanied by Ophthalmoscopic Changes, Ellet O. Sisson, Keokuk, Iowa.

Exhibition of Specimens and New Instruments.

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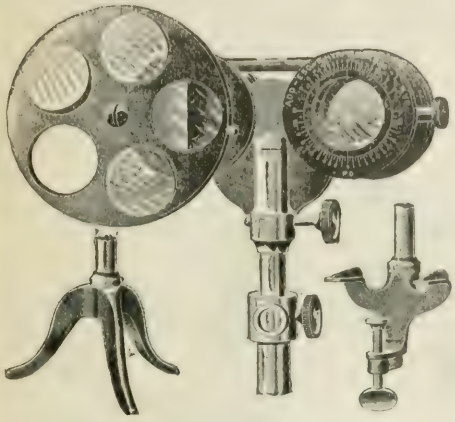

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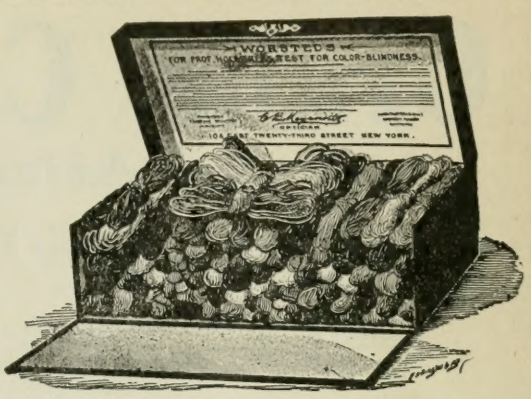

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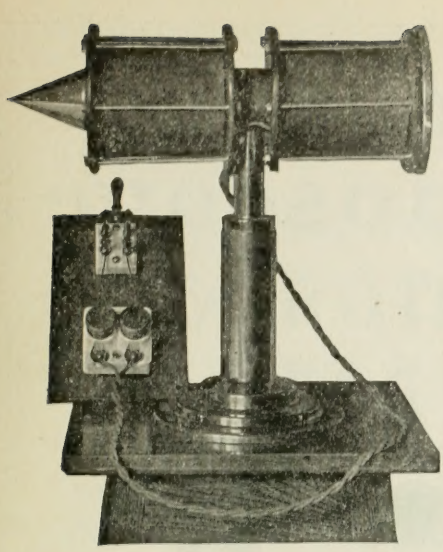

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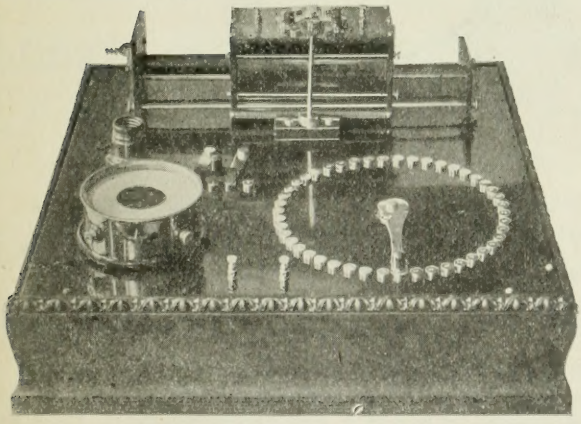

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